Hake and Pollock Study, Strait of Georgia Cruise *R/V G.B. Reed*, December 1-12, 1975

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Le titre exact paraît au haut du résumé de chaque rapport.

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HAKE AND POLLOCK STUDY, STRAIT OF GEORGIA CRUISE R/V G.B. REED, DECEMBER 1-12, 1975

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ABSTRACT

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A total of 24 Engel midwater trawl sets were completed. Pacific hake (Merluccius productus) was the most abundant species (35%) caught. Walleye pollock (Theragra chalcogramma) (32%) and spiny dogfish (Squalus acanthias) (31%) were also present in the catches.

Pacific hake ranged in length from 8-73 cm with males ranging from 8-59 cm (modal length 44 cm) and females ranging from 19-73 cm (modal length 47 cm). The majority of the hake were mature (males 93%, females 94%).

Walleye pollock ranged in length from 22-54 cm. Both male and female pollock had modal lengths of 37 cm. The majority of the males (98%) and females (78%) were mature.

Spiny dogfish were present in every tow with 70% being less than 60 cm.

A total of 19 Isaacs-Kidd midwater plankton trawls were also completed.

Key words: Pacific hake, walleye pollock, spiny dogfish, Engel trawl, Isaacs-Kidd trawl, Strait of Georgia.

RÉSUMÉ

Scarsbrook, J. R., W. Shaw, and G. A. McFarlane. 1984. Hake and pollock study, Strait of Georgia cruise. R/V G.B. REED, December 1-12, 1975. Can. Data Rep. Fish. Aquat. Sci. 430: iv + 86 p.

Des merlus du Pacifique (Merluccius productus), l'espèce la plus abondante (35%), des morues du Pacifique occidental (Theragra chalcogramma) (32%) et des aiguillats communs (Squalus acanthias) (31%) ont été capturés au cours de 24 mouillages de chalut mésopélagique de type Engel.

La longueur des merlus du Pacifique variait de 8 à 73 cm, soit de 8 à 59 cm (longueur modale, 44 cm) chez les mâles et de 19 à 73 cm (longueur modale, 47 cm) chez les femelles. La majorité des spécimens étaient matures.

La longueur des morues du Pacifique occidental variait de 22 à 54 cm, la longueur modale s'élevant à 37 cm chez les deux sexes. La presque totalité des mâles (98%) et des femelles (78%) étaient matures.

Des aiguillats communs, dont 70% mesuraient moins de 60 cm, ont été capturés dans tous les mouillages.

En outre, on a effectué 19 mouillages de chaluts mésopélagique de type Isaacs-Kidd pour capturer du plancton.

Mots-clés: merlu du Pacifique, morue du Pacifique occidental, aiguillat commun, chalut Engel, chalut Isaacs-Kidd, détroit de Géorgie

INTRODUCTION

The December 1975 G.B. REED cruise was conducted to examine the biology and distribution of midwater fishes in the Strait of Georgia, particularly Pacific hake (Merluccius productus), walleye pollock (Theragra chalcogramma) and spiny dogfish (Squalus acanthias). The purpose of this report is to present set information, catch composition and biological data collected during the cruise.

METHODS

The vessel used during the survey was the R/V G.B. REED. The vessel's Simrad 38A scientific echo-sounder was used to locate fish concentrations. All sets were completed using an Engel 434 midwater trawl equipped with an Elac model LAZ 17 headrope transducer. A 2-cm stretched mesh codend liner was used on all tows.

In addition, a series of plankton midwater trawls were made using a 2-m Isaacs-Kidd plankton midwater trawl. Tows were made at various depths targetting upon plankton layers which were determined from an echo-sounder survey completed prior to each tow.

A bathythermograph was used at different set locations to record temperature profiles.

The catch from each set was sorted by species into 55-L (12 gal) galvanized tubs. Each tub was weighed to obtain the weight of the total catch. Small catches were sampled in their entirety, while a representative subsample was taken from larger catches.

Hake and pollock were measured for fork length. Either total catches or random samples of fish were sampled for sex, maturity, and stomach contents. Paired otoliths from hake, and scales and left pectoral fins from pollock were collected for age determination. Dogfish were measured for total length from the tip of the snout to the tip of the upper lobe of the caudal fin when depressed in a line horizontal with the body. Dogfish from selected tows were sampled for sex, maturity, stomach contents, and body weights. Weights were taken from 711 dogfish using a Digimetric 30 DTI top loading balance equipped with a digital integrator.

Other species were noted as being present and estimates of catch made.

The total catch from each Isaacs-Kidd midwater trawl was sorted and all fish species were identified, counted, and measured for fork length. All invertebrates were identified, if possible, and catch estimated by volume (cc).

RESULTS

A total of 24 midwater tows using the Engel midwater trawl were completed during the survey (Fig. 1). Detailed records of the set locations and vertical temperature profiles for selected stations are presented in Appendix Tables 1 and 2, respectively.

A total of 16 species of fish were captured during the survey (Table 1). A list of the common and scientific names of species caught is presented in Table 2.

Both hake and pollock were present in 23 tows and represented 35% and 32% of the total catch, respectively. Dogfish were caught in every tow and comprised 31% of the total catch. Catch summaries for hake, pollock and dogfish are presented in Table 3, and Figures 2, 3, and 4, respectively.

A summary of species sampled other than hake, pollock and dogfish is given in Table 4.

A total of 19 tows using the IKMT were made throughout the Strait of Georgia, Appendix Table 3 (Fig. 5). Depth of tows was determined by using the method described by Beamish et al. (1976). A total of 14 species of fish were captured which totalled 366 individuals. A list of the scientific and common names of species is presented in Table 5. A total of 21 hake were caught ranging in size from 43 mm to 85 mm. Northern smoothtongue was the most abundant comprising 36% of the total catch followed by kelp greenling (20%). No pollock were observed in the catches. The length frequencies for most fishes captured are in Appendix Tables 4-8.

PACIFIC HAKE

A summary of the biological data collected during the cruise is listed in Table 6. A total of 3221 hake were measured for fork length. Length frequencies by set and by sex are presented in Appendix Table 9. The size distribution of hake ranged from 8 to 73 cm. Males composed 50.2% of the total catch and ranged from 8 to 59 cm with a mode at 44 cm. Females ranged from 19 to 73 cm with a mode at 47 cm.

A total of 508 hake were examined for maturity states. Of the male gonads, 83% were in a ripening stage (R1-R2), 10% were resting and the remainder immature. Fourty-five percent of the females had ripening gonads, 47% were resting and the remainder immature.

Only 11 fish were examined for stomach contents.

Otoliths were collected for age determinations from 1370 hake from four sets.

WALLEYE POLLOCK

A summary of the biological data collected is given in Table 7. A total of 1155 pollock were measured for fork length. Length frequencies by set and by sex are presented in Appendix Table 10. Males accounted for 59.5% of the total catch ranging in size from 22-54 cm with a mode at 37 cm. Females ranged from 29 to 51 cm with a mode also at 37 cm.

Stomach contents were examined from 139 pollock from five sets (Table 8).

Gonads were examined from 226 pollock. Of the males examined 83% had ripening gonads (R1-R2), 15% resting, and 2% immature. The majority of the female gonads (44%) were ripening, 34% resting, and 22% immature.

A total of 473 pectoral fins and scales were collected for age determination from one set.

SPINY DOGFISH

A summary of the biological samples collected is listed in Table 9. Dogfish were present in every tow with 70% being less than 60 cm. Male and female dogfish ranged in total length from 31-97 cm and 29-110 cm, respectively. Length frequencies are listed in Appendix Table 11.

Maturity states were examined for 738 dogfish from 22 sets. A total of 623 dogfish were examined for stomach contents (Table 10). Second dorsal fin spines were collected from 656 dogfish for age and growth studies (Fig. 6).

ACKNOWLEDGMENTS

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Table 1. Species composition of midwater trawl catches, December 1-12, 1975.

Set number	1		2		3		4		5	
Estimated total catch (kg)	43		23		49		109		178	
Duration (min)	30		30		30		30		60	
Species	wt	no.	wt	no.	wt	no.	wt	no.	wt	no.
Pacific hake	13	28	5	11	12	24	63	125	111	215
Walleye pollock	1	3	9	17	15	30	34	16	62	116
Spiny dogfish	27	26	5	40	22	12	10	2	5	1
Brown cat shark	1	2								
Ratfish										
Northern smoothtongue	T[a]	9								
Eulachon	T	5								
Northern lampfish	T	5								
Chinook salmon			2	1						
Plainfin midshipman										
Blackfin sculpin	T	1								
Splitnose rockfish										
Vermilion rockfish										
Widow rockfish										
Yellowtail rockfish			2	1			4	1		
Arrowtooth flounder										
Glass shrimp	T									
Squid	T	1								
Jellyfish										

Table 1 (cont'd)

Set number	6		7		8		9		10	
Estimated total catch (kg)	387		47		40		10		9	
Duration (min)	30		30		35		30		30	
Species	wt	no.	wt	no.	wt	no.	wt	no.	wt	no.
Pacific hake	361	450	10	32	18	40	3	9	4	9
Walleye pollock	16	27	4	5	1	1	1	1	1	5
Spiny dogfish	10	3	30	30	19	37	2	5	3	4
Brown cat shark			1	1	1	1			T	1
Ratfish										
Northern smoothtongue			T	2		1				
Eulachon										
Northern lampfish			T	18		4			T	1
Chinook salmon										
Plainfin midshipman							T	2		
Blackfin sculpin						1				
Splitnose rockfish							2	1		
Vermilion rockfish										
Widow rockfish										
Yellowtail rockfish										
Arrowtooth flounder										
Glass shrimp			T	35		20				
Squid			1	3			T	2		1
Jellyfish							1	1		

Table 1 (cont'd)

Set number	11		12		13		14		15	
Estimated total catch (kg)	6		4		100		84		254	
Duration (min)	2		30		30		30		30	
Species	wt	no.	wt	no.	wt	no.	wt	no.	wt	no.
Pacific hake	1	1			11	9	48	103	147	196
Walleye pollock	T	1	T	1	6	11	1	5	10	17
Spiny dogfish	4	2	3	11	57	27	31	20	91	145
Brown cat shark							2	3	1	2
Ratfish					24	12[b]			2	4
Northern smoothtongue										
Eulachon										
Northern lampfish										
Chinook salmon										
Plainfin midshipman										
Blackfin sculpin										
Splitnose rockfish									1	2
Vermilion rockfish									2	1
Widow rockfish										
Yellowtail rockfish										
Arrowtooth flounder					1	1				
Glass shrimp										
Squid					T	T	2	2		
Jellyfish										

Table 1 (cont'd)

Set number	16		17		18		19		20	
Estimated total catch (kg)	1235		345		429		124		31	
Duration (min)	30		30		30		30		30	
Species	wt	no.	wt	no.	wt	no.	wt	no.	wt	no.
Pacific hake	39	47	261	423	374	601	79	135	3	6
Walleye pollock			75	126	30	55	3	4	17	22
Spiny dogfish	1192	1700[a]	6	3	22	10	40	53	10	4
Brown cat shark							1	2		
Ratfish										
Northern smoothtongue										
Eulachon										
Northern lampfish										
Chinook salmon										
Plainfin midshipman										
Blackfin sculpin										
Splitnose rockfish										
Vermilion rockfish										
Widow rockfish	1	1								
Yellowtail rockfish	3	1	3	1	3	1				
Arrowtooth flounder										
Glass shrimp										
Squid							T	1	1	4
Jellyfish										

Table 1 (cont'd)

Set number	21		22		23		24		Total[c]	
Estimated total catch (kg)	150		47		67		1832		5603	
Duration (min)	30		30		30		20			
Species	wt	no.	wt	no.	wt	no.	wt	no.	wt	no.
Pacific hake	123	254	14	33	38	40	234	410	1972	3201
Walleye pollock	2	3	6	10	17	29	1499	2730[b]	1811	3235
Spiny dogfish	23	33	26	22	11	5	99	46	1748	2241
Brown cat shark	1	3							8	15
Ratfish									26	16
Northern smoothtongue									T	12
Eulachon									T	5
Northern lampfish		1							T	29
Chinook salmon									2	1
Plainfin midshipman									T	2
Blackfin sculpin									T	2
Splitnose rockfish									3	3
Vermilion rockfish									2	1
Widow rockfish									1	1
Yellowtail rockfish									15	5
Arrowtooth flounder									1	1
Glass shrimp									T	55
Squid	1	1	1	1	.5	1			8	20
Jellyfish									1	1

[a]T = Catch < 1 kg

[b]Calculated value

[c]Totals are a summarization of values only and do not represent total catches as values for weights and numbers are not available for all tows.

Table 2. Common and scientific names of fishes captured, December 1-12, 1975.

Common name	Scientific name
Pacific hake	*Merluccius productus*
Walleye pollock	*Theragra chalcogramma*
Spiny dogfish	*Squalus acanthias*
Brown cat shark	*Apristurus brunneus*
Ratfish	*Hydrolagus colliei*
Northern smoothtongue	*Leuroglossus stilbius schmidti*
Eulachon	*Thaleichthys pacificus*
Northern lampfish	*Stenobrachius leucopsarus*
Chinook salmon	*Oncorhynchus tshawytscha*
Plainfin midshipman	*Porichthys notatus*
Blackfin sculpin	*Malacocottus kincaidi*
Splitnose rockfish	*Sebastes diploproa*
Vermilion rockfish	*Sebastes miniatus*
Widow rockfish	*Sebastes entomelas*
Yellowtail rockfish	*Sebastes flavidus*
Arrowtooth flounder	*Atheresthes stomias*
Glass shrimp	*Pasiphaea pacifica*

Table 3. Catch rates of hake, pollock, and dogfish by set using the Engel 434 midwater trawl, December 1-12, 1975.

Set No.	Hake		Pollock		Dogfish	
	No.	kg/hr	No.	kg/hr	No.	kg/hr
1	28	26	3	2	26	54
2	11	10	17	18	40	10
3	24	24	30	30	12	44
4	125	126	34	32	2	20
5	215	111	116	62	1	5
6	450	722	27	32	3	20
7	32	20	5	8	30	60
8	40	31	1	2	37	33
9	9	6	1	2	5	10
10	9	8	5	2	4	6
11	1	30	1	15	2	120
12	0	0	1	1	11	6
13	9	22	11	12	27	114
14	103	96	5	2	20	62
15	196	294	17	20	145	182
16	47	78	0	0	1700[a]	2384
17	423	522	126	150	3	12
18	601	748	55	60	10	44
19	135	158	4	6	53	80
20	6	6	25	34	4	20
21	254	246	3	4	33	46
22	33	28	10	12	22	52
23	40	76	29	34	5	22
24	430	702	473	4497	26	297

[a]Estimated no.

Table 4. Summary of species sampled, other than hake, pollock, and dogfish, December 1-12, 1975.

Species	Type of sample taken						
	Set No.	Length	Sex	Maturity	Stomach Contents	Total no. in catch	No. preserved
Brown cat shark	1	2				2	
	7	1				1	
	8	1	1			1	
	14	3	3			3	
	15	2				2	
	19	2	2			2	
	21	3	3			3	
Chinook salmon	2	1	1	1	1	1	
Splitnose rockfish	15	2	2			2	
Vermilion rockfish	15	1	1				1
Widow rockfish	16	1	1			1	
Yellowtail rockfish	4	1	1			1	
	16	1	1			1	
	17	1	1			1	
	18	1	1			1	

Table 5. Species captured using the 2-m Isaacs Kidd midwater trawl.

Common name	Scientific name	No. of specimens
Pacific hake	Merluccius productus	21
Northern smoothtongue	Leuroglossus stilbius schmidti	131
Eulachon	Thaleichthys pacificus	27
Longfin smelt	Spirinchus thaleichthys	1
Northern lampfish	Stenobrachius leucopsarus	16
Pacific lamprey	Lampetra tridentatus	3
Pallid eelpout	Lycodapus mandibularis	12
Tadpole snailfish	Nectoliparis pelagicus	46
Non-disced snailfish	Family Cyclopteridae	13
Disked snailfish	Family Cyclopteridae	5
Kelp greenling	Hexagrammos decagrammus	74
Sculpin	Family Cottidae	1
Blackfin sculpin	Malacocottus kincaidi	3
Soft sculpin	Gilbertidia sigalutes	13

Table 6. Summary of hake sampled, December 1-12, 1975.

Set no.	Length			Maturity	Stomach Contents	Otoliths	Remarks[a]
	Male	Female	Total				
1	17	11	28				Total catch
2	6	5	11	11	11		Total catch
3	14	10	24				Total catch
4	96	29	125				Total catch
5	156	59	215				Total catch
6	273	177	450	149		450	Random-6 tubs of 11 tubs
7	15	17	32				Total catch
8	19	21	40				Total catch
9	1	8	9				Total catch
10	3	6	9	9			Total catch
11	0	1	1				Total catch
12							No catch
13	0	9	9				Total catch
14	65	38	103				Total catch
15	45	151	196	67		67	L/S on total catch/oto-1 tub
16	4	43	47				Total catch
17	172	251	423	134		423	Total catch
18	276	325	601				Total catch
19	49	86	135				Total catch
20	4	2	6				Total catch
21	128	126	254				Total catch
22	14	19	33				Total catch
23	1	39	40				Total catch
24	258	172	430	138		430	L/S oto on total catch L/S/mat/oto on middle 2 tubs
Total	1616	1605	3221	508	11	1370	

[a]L=length

S=sex

mat=maturity

oto=otoliths

Table 7. Summary of pollock sampled, December 1-12, 1975.

Set no.	Length			Maturity	Stomach Contents	Fins & Scales	Remarks[a]
	Male	Female	Total				
1	2	1	3	3	3		Total catch
2	7	10	17	17	17		Total catch
3	17	13	30	30	30		Total catch
4	22	12	34	34	34		Total catch
5	64	52	116				Total catch
6	13	14	27				Total catch
7	4	1	5				Total catch
8	0	1	1				Total catch
9	1	0	1	1			Total catch
10	3	2	5				Total catch
11	1	0	1				Total catch
12	0	1	1				Total catch
13	5	6	11				Total catch
14	2	3	5				Total catch
15	6	11	17				Total catch
16							No catch
17	80	46	126				Total catch
18	23	32	55	55	55		Total catch
19	0	4	4				Total catch
20	20	5	25				Total catch
21	0	3	3				Total catch
22	5	5	10				Total catch
23	9	20	29				Total catch
24	403	226	629	86		473	Random L/S Age 6 tubs of 35; L/S/Age/mat on 1 of 6 tubs; L/S on 2 additional tubs
Total	687	468	1155	226	139	473	

[a] L=length

S=sex

mat=maturity

Age=fins & scales

Table 8. Pollock stomach contents, December 1-12, 1975.

Number examined	139	
Number empty	17	
Number with everted stomachs	1	
	Volume (cc)	%
Euphausiids	53	76.8
Ampnipods	11	15.9
Glass shrimp	3	4.4
Digested zooplankton	1.5	2.2
Polychaete	0.5	0.7
Total	69	100.0

Table 9. Summary of dogfish sampled, December 1-12, 1975.

Set no.	Length			Maturity	Stomach Contents	Spines	Individual Weights	Remarks
	Male	Female	Total					
1	11	15	26	26	26			Total catch
2	22	18	40	40	40		40	Total catch
3	3	9	12	10	12		9	Total catch
4	0	2	2	2	2		2	Total catch
5	0	1	1	1	1		1	Total catch
6	1	2	3	3	3		3	Total catch
7	18	12	30	30	30	30	30	Total catch
8	29	8	37	37	37	37	37	Total catch
9	5	0	5	5	5	5	5	Total catch
10	3	1	4	4	4	4	4	Total catch
11	1	1	2	2	2	2	2	Total catch
12	3	8	11	11	11	11	11	Total catch
13	26	1	27	27	27	27	27	Total catch
14	10	10	20	20	20	20	20	Total catch
15	88	57	145	145	145	145	145	Total catch
16	348	130	478	232	115	232	232	Random-8 tubs of 32
17	3	0	3					Total catch
18	10	0	10					Total catch
19	30	23	53	53	53	53	53	Total catch
20	0	4	4	4	4	4	4	Total catch
21	22	11	33	33	33	33	33	Total catch
22	14	8	22	22	22	22	22	Total catch
23	5	0	5	5	5	5	5	Total catch
24	6	20	26	26	26	26	26	Total catch
Total	658	341	999	738	623	656	711	

Table 10. Dogfish stomach contents, December 1-12, 1975.

	Dogfish < 60 cm (Total length)	Dogfish > 60 cm (Total length)	Total
Number examined	429	194	623
Number empty	157	98	255
	Volume (cc)	Volume (cc)	Volume (cc)
Herring	10	722	732
Pollock	-	700	700
Hake	10	660	670
Squid	16	631	647
Flatfish	-	50	50
Unidentified fish remains	15	428	443
Digested zooplankton	146	91	237
Euphausiids	23	4	27
Ctenophore	51	6	57
Invertebrates	1	3	4
Polychaete	8	2	10
Shrimp	2	2	4
Jellyfish	17	-	17
Digested matter	2	-	2
Amphipods	1	-	1
Totals	302	3299	3601

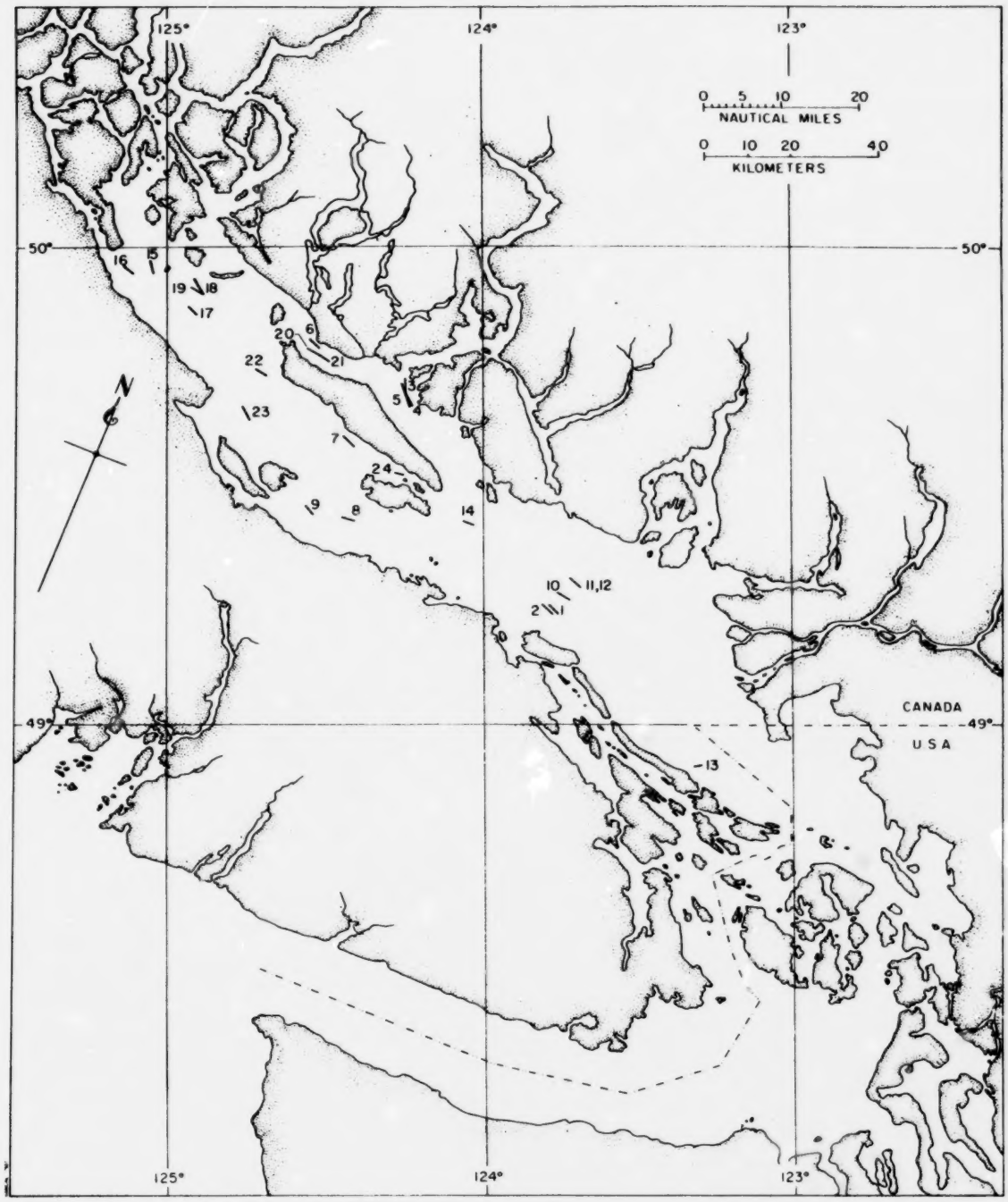

Fig. 1. Set locations using midwater Engel Trawl net. G.B. REED, Dec. 1-12, 1975.

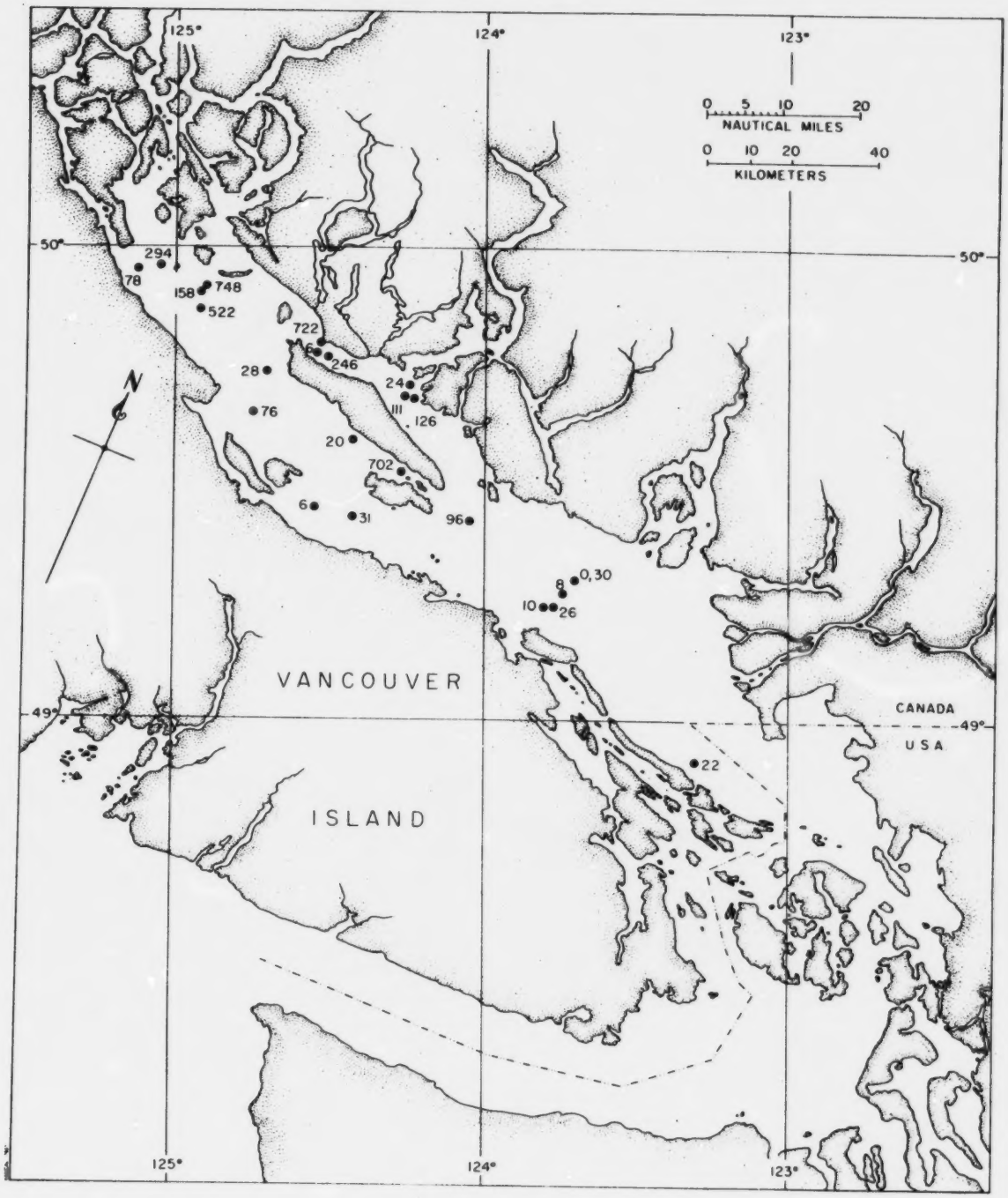

Fig. 2. Pacific hake catch rates (kg/h). G.B. REED Dec. 1-12, 1975.

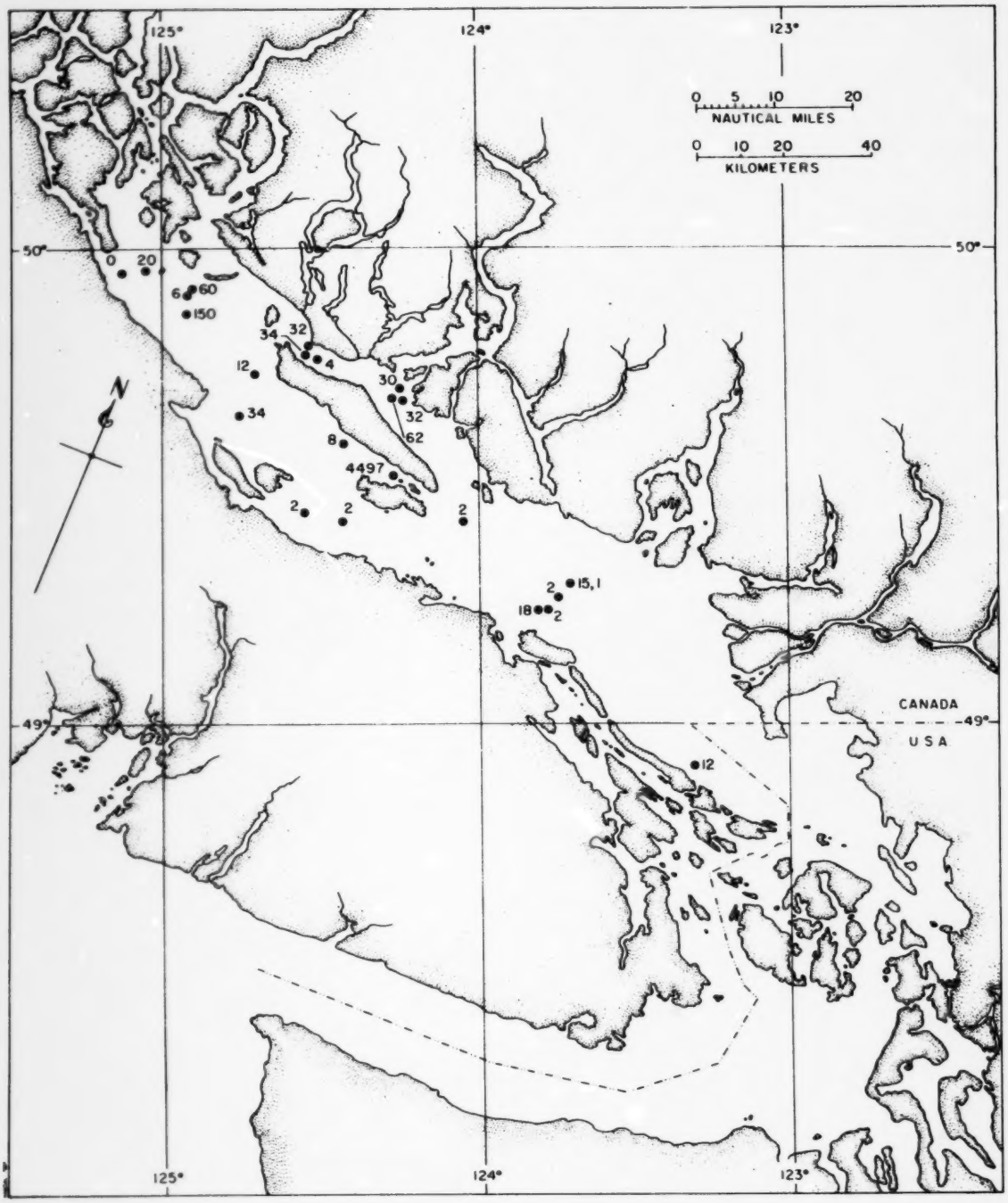

Fig. 3. Walleye pollock catch rates (kg/h). G.B. REED Dec. 1-12, 1975.

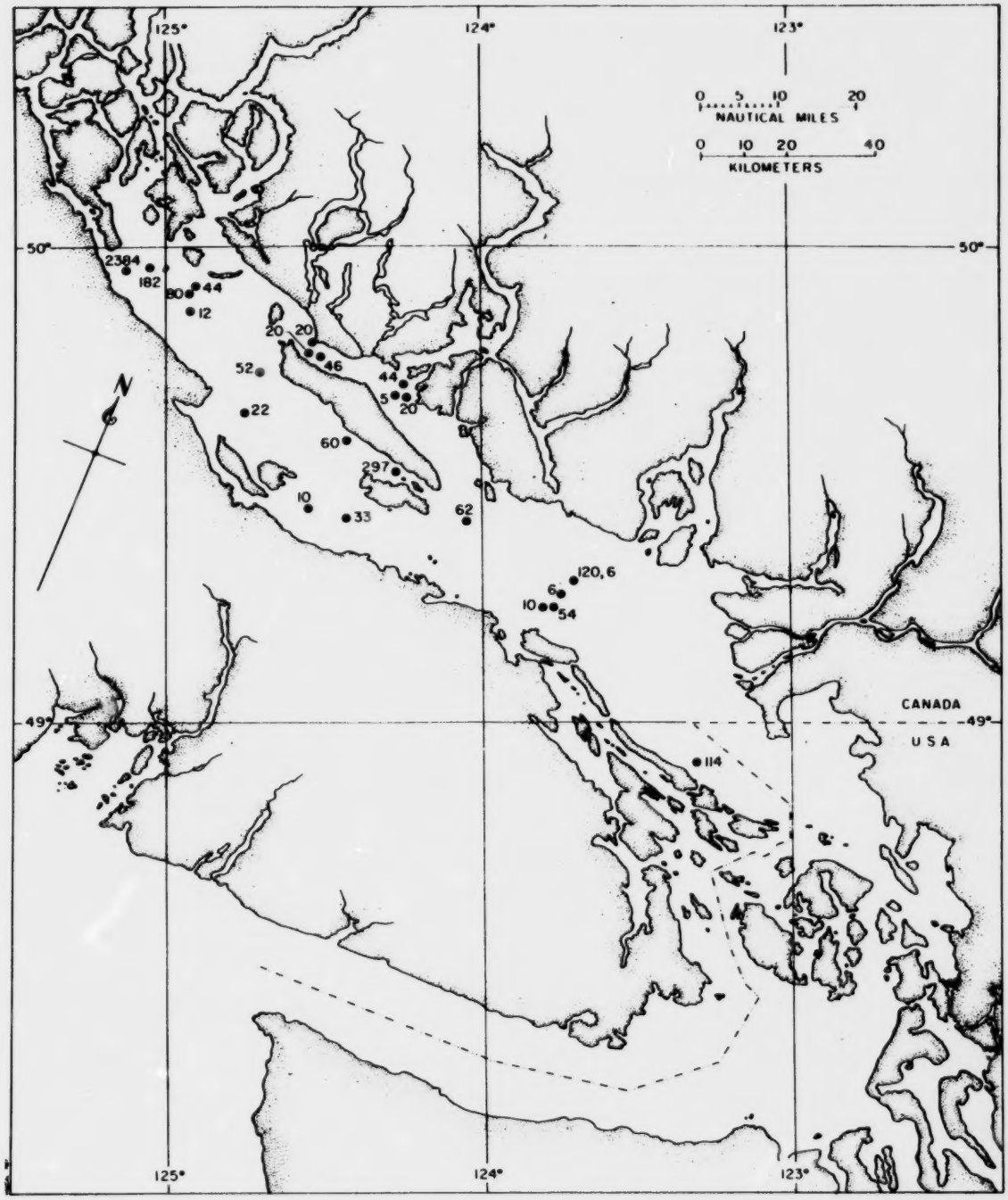

Fig. 4. Spiny dogfish catch rates (kg/h). G.B. REED Dec. 1-12, 1975.

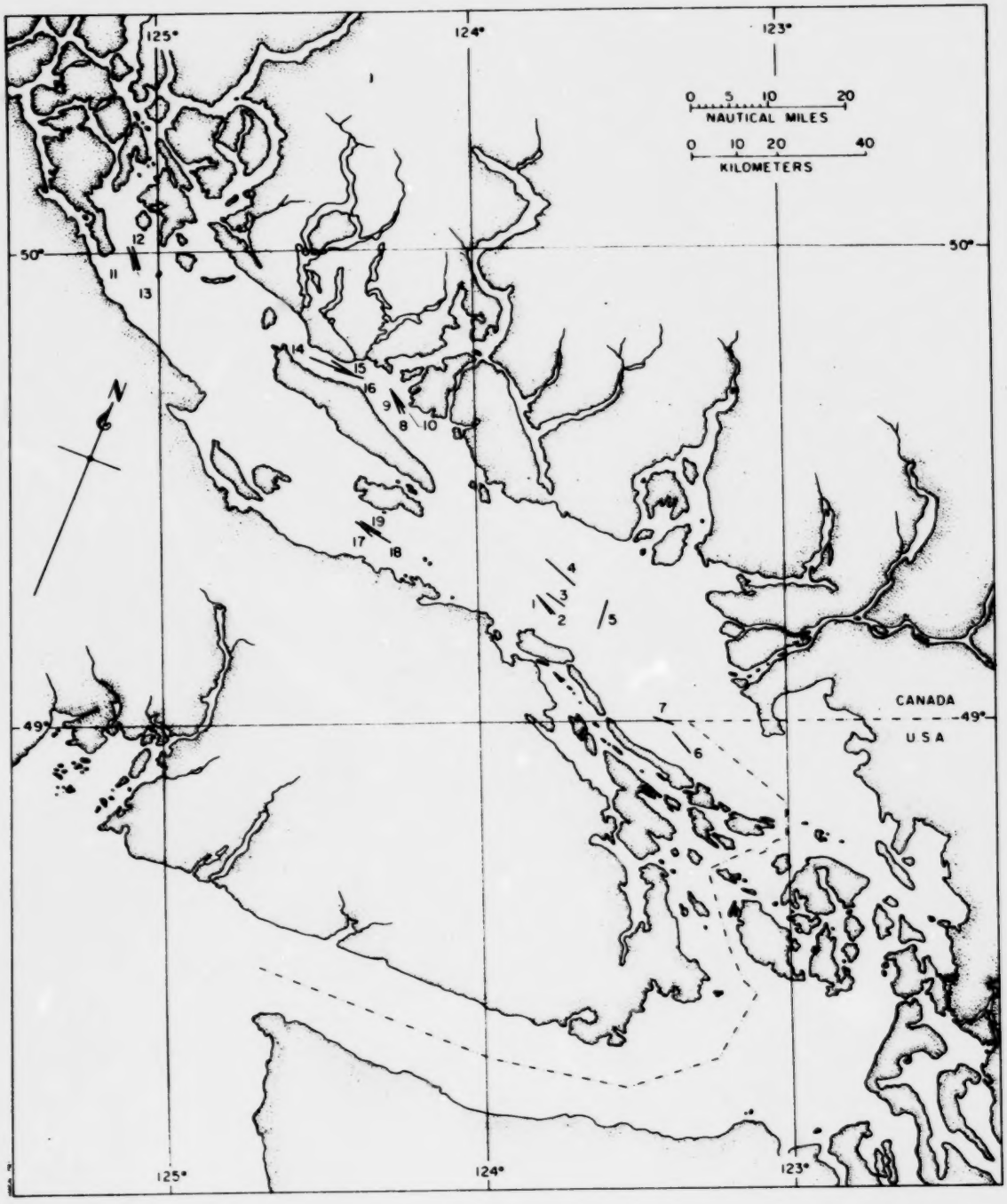

Fig. 5. Set locations using Isaacs-Kidd midwater trawl. G.B. REED Dec. 1-12, 1975.

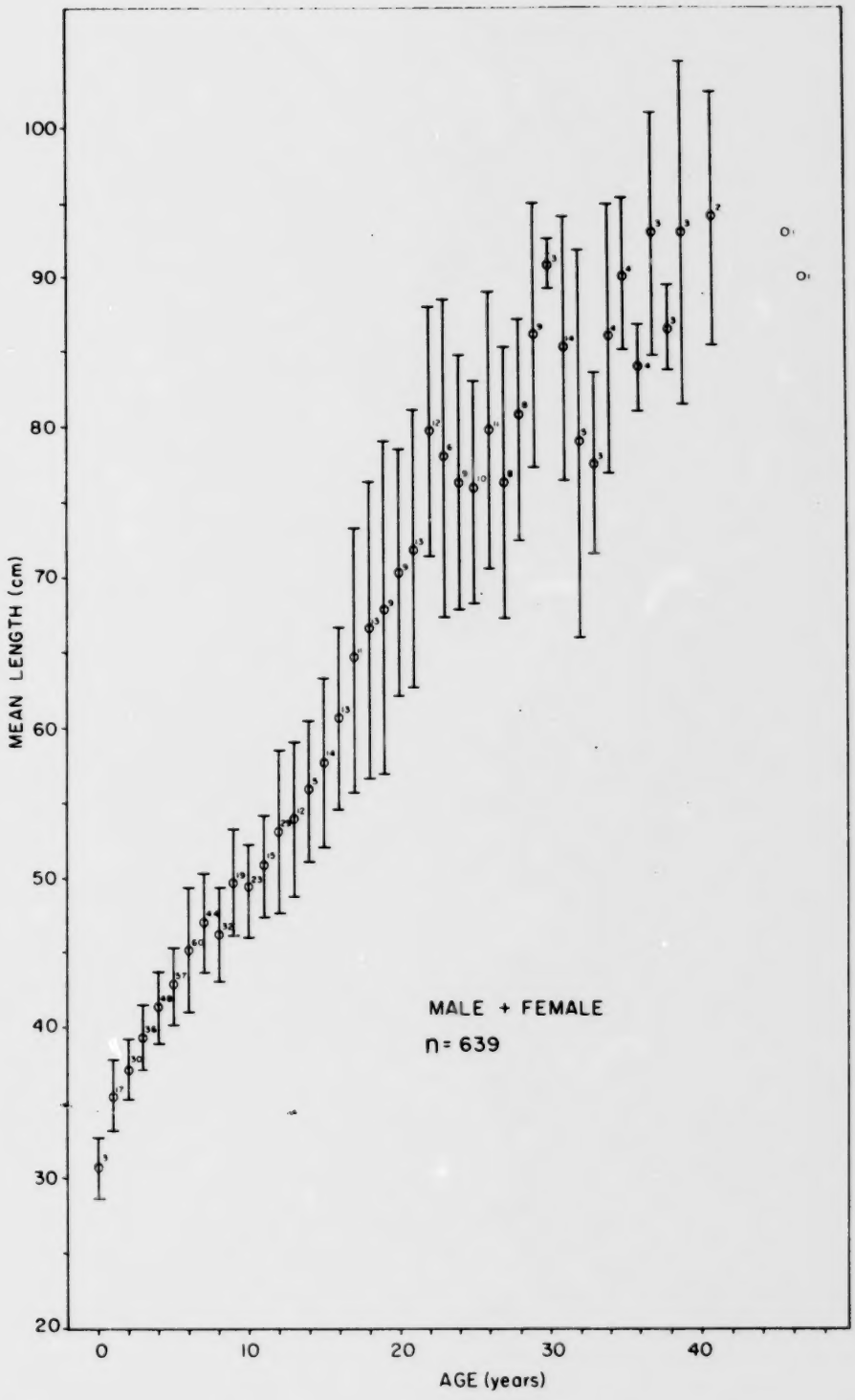

Fig. 6. Mean length at age plot for spiny dogfish.

Appendix Table 1. Set information for Engel Trawl, December 1-12, 1975.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 1 SET/HAUL NO. 1

LOCATION: 3 mi. N. of Entrance Island AREA: Strait of Georgia

START: Lat. 49° 15.5' N Long. 123° 47.2' W

END: Lat. 49° 14.7' N Long. 123° 45.5' W

GEAR: Engel 434 START TIME (PST) : 1450 DURATION (min): 30

BOTTOM DEPTH (m): Start: 412 End: 419 Est. av. Depth: 416

NET DEPTH RANGE m: 230-248 Est. av. Depth: 239

DIRECTION OF SET °true: 110 SPEED kn: 3.5 DISTANCE TRAVELLED mi. 2.0

SET ON: Target 252 m WATER CONDITION: Ripple TIDE: Ebb

WIND DIRECTION: Southwest WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: - OTHER OCEANOGRAPHIC DATA: -

REMARKS: Net open 14 m

SOUNDER SUMMARY: Light spotting at 54 m, scattering layer 54 m-63 m, light scattering 234 m-324 m.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 1 SET/HAUL NO. 2

LOCATION: 3 mi. N. of Entrance Island AREA: Strait of Georgia

START: Lat. 49° 14.7' N Long. 123° 46.4' W

END: Lat. 49° 15.7' N Long. 123° 48.3' W

GEAR: Engel 434 START TIME (PST) : 1558 DURATION (min): 30

BOTTOM DEPTH (m): Start: 409 End: 411 Est. av. Depth: 410

NET DEPTH RANGE m: 128-101 Est. Av. Depth: 115

DIRECTION OF SET °true: 290 SPEED kn: 2.5 DISTANCE TRAVELLED mi. 1.3

SET ON: Target 126 m WATER CONDITION: Ripple TIDE: Ebb

WIND DIRECTION: Southeast WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: #1 OTHER OCEANOGRAPHIC DATA: -

REMARKS: Net open 12 m; Groundline broke

SOUNDER SUMMARY: Faint scatter at 126 m; light individual scatter 190-252 m.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 2 SET/HAUL NO. 3

LOCATION: Sinclair Bank AREA: Malaspina Strait

START: Lat. 49° 43.9' N Long. 124° 14.8' W

END: Lat. 49° 41.3' N Long. 124° 14.3' W

GEAR: Engel 434 START TIME (PST) : 0825 DURATION (min): 30

BOTTOM DEPTH (m): Start: 259 End: 288 Est. av. Depth: 274

NET DEPTH RANGE m: 97-87 Est. av. Depth: 92

DIRECTION OF SET °true: 160 SPEED kn: 2.5 DISTANCE TRAVELLED mi. 1.5

SET ON: Target 90 m WATER CONDITION: Ripple TIDE: Ebb

WIND DIRECTION: Southeast WIND SPEED: 6 RECORDER: Keni Weir

TTM: - TDM: - BT: - OTHER OCEANOGRAPHIC DATA: -

REMARKS: Net open 13 m

SOUNDER SUMMARY: Heavy continuous spotting 54-126 m; light scattering 126 m to bottom

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 2 SET/HAUL NO. 4

LOCATION: Sinclair Bank AREA: Malaspina Strait

START: Lat. 49° 41.8' N Long. 124° 14.7' W

END: Lat. 49° 40.25 N Long. 124° 13.8' W

GEAR: Engel 434 START TIME (PST) : 1006 DURATION (min): 30

BOTTOM DEPTH (m): Start: 259 End: 313 Est. av. Depth: 286

NET DEPTH RANGE m: 113-104 Est. Av. Depth: 109

DIRECTION OF SET °true: 160 SPEED kn: 3 DISTANCE TRAVELLED mi.

SET ON: Target 108 m WATER CONDITION: Ripple TIDE: Ebb

WIND DIRECTION: Southeast WIND SPEED: 10 RECORDER: Keni Weir

TTM: - TDM: - BT: - OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Heavy spotting continuous throughout tow 99 m-126 m, very light scattering layer 162 m-234 m.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 2 SET/HAUL NO. 5

LOCATION: Sinclair Bank AREA: Malaspina Strait

START: Lat. 49° 42.9' N Long. 124° 15.5' W

END: Lat. 49° 39.9' N Long. 124° 13.8' W

GEAR: Engel 434 START TIME (PST) : 1241 DURATION (min): 60

BOTTOM DEPTH (m): Start: 144 End: 292 Est. av. Depth: 218

NET DEPTH RANGE m: 108-108 Est. av. Depth: 108

DIRECTION OF SET °true: 160 SPEED kn: 2.5 DISTANCE TRAVELLED mi. 3.0

SET ON: Target 117 m WATER CONDITION: Ripple TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 10 RECORDER: Keni Weir

TTM: - TDM: - BT: #2 OTHER OCEANOGRAPHIC DATA: -

REMARKS: Net open 14 m

SOUNDER SUMMARY: Light scattering 108 m-126 m; very lightly scattering 126 m to bottom

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 2 SET/HAUL NO. 6

LOCATION: Westview AREA: Malaspina Strait

START: Lat. 49° 48.4' N Long. 124° 32.9' W

END: Lat. 49° 47.2' N Long. 124° 31.2' W

GEAR: Engel 434 START TIME (PST) : 1557 DURATION (min): 30

BOTTOM DEPTH (m): Start: 205 End: 205 Est. av. Depth: 205

NET DEPTH RANGE m: 90-85 Est. Av. Depth: 88

DIRECTION OF SET °true: 155 SPEED kn: 3 DISTANCE TRAVELLED mi. 2.0

SET ON: Target 90 m WATER CONDITION: Chop TIDE: Flood/slack

WIND DIRECTION: Southeast WIND SPEED: 25 RECORDER: Keni Weir

TTM: - TDM: - BT: #3 OTHER OCEANOGRAPHIC DATA: -

REMARKS: Net open 13 m.

SOUNDER SUMMARY: Moderate scattering layer 63-99 m; light spotting 72-99m

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 3 SET/HAUL NO. 7

LOCATION: West side of Texada Island AREA: Strait of Georgia

START: Lat. 49° 36.3' N Long. 124° 26.5' W

END: Lat. 49° 35.3' N Long. 124° 24.8' W

GEAR: Engel 434 START TIME (PST) : 0840 DURATION (min): 30

BOTTOM DEPTH (m): Start: 342 End: 342 Est. av. Depth: 342

NET DEPTH RANGE m: 257-257 Est. av. Depth: 257

DIRECTION OF SET °true: 125 SPEED kn: 2.5 DISTANCE TRAVELLED mi. 1.5

SET ON: Target 270 m WATER CONDITION: Light chop TIDE: Ebb

WIND DIRECTION: Southeast WIND SPEED: 15 RECORDER: Keni Weir

TTM: - TDM: - BT: - OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Light scattering 252 m-288 m

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 3 SET/HAUL NO. 8

LOCATION: Sisters Island AREA: Strait of Georgia

START: Lat. 49° 26.6' N Long. 124° 27.1' W

END: Lat. 49° 25.9' N Long. 124° 24.6' W

GEAR: Engel 434 START TIME (PST) : 1119 DURATION (min): 35

BOTTOM DEPTH (m): Start: 331 End: 335 Est. av. Depth: 333

NET DEPTH RANGE m: 209-218 Est. Av. Depth: 214

DIRECTION OF SET °true: 110 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.7

SET ON: Target 216 m WATER CONDITION: Chop TIDE: Ebb

WIND DIRECTION: Southeast WIND SPEED: 25 RECORDER: Keni Weir

TTM: - TDM: - BT: #4 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Very light scatter 126 m-162 m; light scatter 198 m-270 m Light scatter 296 m to bottom.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 3 SET/HAUL NO. 9

LOCATION: South Hornby Island AREA: Strait of Georgia

START: Lat. 49° 26.6' N Long. 124° 32.5' W

END: Lat. 49° 27.8' N Long. 124° 34.2' W

GEAR: Engel 434 START TIME (PST) : 1400 DURATION (min): 30

BOTTOM DEPTH (m): Start: 198 End: 216 Est. av. Depth: 207

NET DEPTH RANGE m: 90-133 Est. av. Depth: 112

DIRECTION OF SET °true: 305 SPEED kn: 2-3 DISTANCE TRAVELLED mi. 1.6

SET ON: Target 126 m WATER CONDITION: Chop TIDE: Flood

WIND DIRECTION: Northwest WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: #5 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Very light continuous scattering 126 m to bottom.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 4 SET/HAUL NO. 10

LOCATION: Halibut Bank AREA: Strait of Georgia

START: Lat. 49° 17.2' N Long. 123° 45.5' W

END: Lat. 49° 16.15' N Long. 123° 44.2' W

GEAR: Engel 434 START TIME (PST) : 1020 DURATION (min): 30

BOTTOM DEPTH (m): Start: 389 End: 403 Est. av. Depth: 396

NET DEPTH RANGE m: 234-230 Est. Av. Depth: 232

DIRECTION OF SET °true: 115 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.3

SET ON: Target 234 m WATER CONDITION: Light chop TIDE: Ebb

WIND DIRECTION: South southwest WIND SPEED: 10 RECORDER: Keni Weir

TTM: - TDM: - BT: #6 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Light scattering layer 126 m-162 m; very light continuous spotting 216 m-234 m.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 4 SET/HAUL NO. 11

LOCATION: Halibut Bank AREA: Strait of Georgia

START: Lat. 49° 18.7' N Long. 123° 43.2' W

END: Lat. Long.

GEAR: Engel 434 START TIME (PST) : 1230 DURATION (min): 2

BOTTOM DEPTH (m): Start: 252 End: - Est. av. Depth: -

NET DEPTH RANGE m: - Est. av. Depth: -

DIRECTION OF SET °true: 145 SPEED kn: 3 DISTANCE TRAVELLED mi. -

SET ON: Target 120 m WATER CONDITION: Ripple TIDE: Ebb

WIND DIRECTION: Northwest WIND SPEED: 4 RECORDER: Keni Weir

TTM: - TDM: - BT: - OTHER OCEANOGRAPHIC DATA: -

REMARKS: Hauled back as transducer wire broke.

SOUNDER SUMMARY: Scattering at 126 m.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 4 SET/HAUL NO. 12

LOCATION: Halibut Bank AREA: Strait of Georgia

START: Lat. 49° 18.7' N Long. 123° 43.2' W

END: Lat. 49° 17.6' N Long. 123° 41.4' W

GEAR: Engel 434 START TIME (PST) : 1400 DURATION (min): 30

BOTTOM DEPTH (m): Start: 292 End: 292 Est. av. Depth: 292

NET DEPTH RANGE m: - Est. Av. Depth: 135

DIRECTION OF SET °true: 145 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.6

SET ON: Target 126 m WATER CONDITION: Ripple TIDE: Ebb

WIND DIRECTION: Northwest WIND SPEED: 4 RECORDER: Keni Weir

TTM: TDM: - BT: #7 OTHER OCEANOGRAPHIC DATA: -

REMARKS: Net badly ripped

SOUNDER SUMMARY: Light continuous scattering 126 m to bottom - no definite layers.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 5 SET/HAUL NO. 13

LOCATION: Active Pass AREA: Strait of Georgia

START: Lat. 48° 55.6' N Long. 123° 18.0' W

END: Lat. 48° 55.4' N Long. 123° 19.4' W

GEAR: Engel 434 START TIME (PST) : 0821 DURATION (min): 30

BOTTOM DEPTH (m): Start: 187 End: 191 Est. av. Depth: 189

NET DEPTH RANGE m: - Est. av. Depth: 171

DIRECTION OF SET °true: 310 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.1

SET ON: Target 108 m WATER CONDITION: Light chop TIDE: Ebb

WIND DIRECTION: Southwest WIND SPEED: 12 RECORDER: Keni Weir

TTM: - TDM: - BT: #8 OTHER OCEANOGRAPHIC DATA: -

REMARKS: Ripped net

SOUNDER SUMMARY: Light continuous spotting 90 m to bottom - no disinct layers

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 8 SET/HAUL NO. 14

LOCATION: South of Texada Island AREA: Strait of Georgia

START: Lat. 49° 25.4' N Long. 124° 1.5' W

END: Lat. 49° 26.2' N Long. 124° 3.6' W

GEAR: Engel 434 START TIME (PST) : 1429 DURATION (min): 30

BOTTOM DEPTH (m): Start: 401 End: 396 Est. av. Depth: 399

NET DEPTH RANGE m: 167-205 Est. Av. Depth: 186

DIRECTION OF SET °true: 304 SPEED kn: 3.5 DISTANCE TRAVELLED mi. 1.8

SET ON: Target 198 m WATER CONDITION: Light chop TIDE: Ebb

WIND DIRECTION: East WIND SPEED: 8 RECORDER: Keni Weir

TTM: - TDM: - BT: #9 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Light scatter 108 m-126 m, light spotting 144 m-288 m.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 9 SET/HAUL NO. 15

LOCATION: Mitlenatch Island AREA: Strait of Georgia

START: Lat. 49° 58.05' N Long. 125° 3.2' W

END: Lat. 49° 56.95' N Long. 125° 3.0' W

GEAR: Engel 434 START TIME (PST) : 0858 DURATION (min): 30

BOTTOM DEPTH (m): Start: 284 End: 329 Est. av. Depth: 307

NET DEPTH RANGE m: 196-279 Est. av. Depth: 238

DIRECTION OF SET °true: 150 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.3

SET ON: Target 252 m WATER CONDITION: Light chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: #10 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Continuous scattering 180 m to bottom - no distinct layers.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 9 SET/HAUL NO. 16

LOCATION: Mitlenatch Island AREA: Strait of Georgia

START: Lat. 49° 57.5' N Long. 125° 8.5' W

END: Lat. 49° 56.6' N Long. 124° 6.7' W

GEAR: Engel 434 START TIME (PST) : 1047 DURATION (min): 30

BOTTOM DEPTH (m): Start: 155 End: 175 Est. av. Depth: 165

NET DEPTH RANGE m: 108-135 Est. Av. Depth: 122

DIRECTION OF SET °true: 130 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.5

SET ON: Target 126 m WATER CONDITION: Light chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: #11 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Light scatter 108 m to bottom.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 9 SET/HAUL NO. 17

LOCATION: Mitlenatch Island AREA: Strait of Georgia

START: Lat. 49° 52.2' N Long. 124° 56.6' W

END: Lat. 49° 51.1' N Long. 124° 54.9' W

GEAR: Engel 434 START TIME (PST) : 1358 DURATION (min): 30

BOTTOM DEPTH (m): Start: 252 End: 301 Est. av. Depth: 277

NET DEPTH RANGE m: 92-101 Est. av. Depth: 97

DIRECTION OF SET °true: 144 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.8

SET ON: Target 99 m WATER CONDITION: Light chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: #12 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Light to moderate spotting 72 m-108 m.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 10 SET/HAUL NO. 18

LOCATION: Mitlenatch Island AREA: Strait of Georgia

START: Lat. 49° 53.85' N Long. 124° 53.7' W

END: Lat. 49° 55.35' N Long. 124° 55.2' W

GEAR: Engel 434 START TIME (PST) : 0829 DURATION (min): 30

BOTTOM DEPTH (m): Start: 247 End: 234 Est. av. Depth: 241

NET DEPTH RANGE m: 92-87 Est. Av. Depth: 90

DIRECTION OF SET °true: 320 SPEED kn: 3.5 DISTANCE TRAVELLED mi. 1.75

SET ON: Target 90 m WATER CONDITION: Chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: #13 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Light to moderate spotting 81 m-126 m; light scatter with spotting 180 m to bottom.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 10 SET/HAUL NO. 19

LOCATION: Mitlenatch Island AREA: Strait of Georgia

START: Lat. 49° 53.8' N Long. 124° 53.9' W

END: Lat. 49° 55.1' N Long. 124° 55.35' W

GEAR: Engel 434 START TIME (PST): 0954 DURATION (min): 30

BOTTOM DEPTH (m): Start: 245 End: 223 Est. av. Depth: 234

NET DEPTH RANGE m: 187-194 Est. av. Depth: 191

DIRECTION OF SET °true: 320 SPEED kn: 3.5 DISTANCE TRAVELLED mi. 1.5

SET ON: Target 198 m WATER CONDITION: moderate chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: - OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Light to moderate occasional spotting 81 m-108 m; light scatter with occasional spotting 162 m to bottom.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 10 SET/HAUL NO. 20

LOCATION: Westview AREA: Strait of Georgia

START: Lat. 49° 46.3'N Long. 124° 31.2' W

END: Lat. 49° 47.4'N Long. 124° 33.2' W

GEAR: Engel 434 START TIME (PST): 1228 DURATION (min): 30

BOTTOM DEPTH (m): Start: 319 End: 320 Est. av. Depth: 319

NET DEPTH RANGE m: 124-126 Est. Av. Depth: 125

DIRECTION OF SET °true: 305 SPEED kn: 3 DISTANCE TRAVELLED mi. 2.1

SET ON: Target 126 m WATER CONDITION: moderate chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 15 RECORDER: Keni Weir

TTM: - TDM: - BT: #14 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Very light scatter and light spotting 126 m to bottom.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 10 SET/HAUL NO. 21

LOCATION: Westview AREA: Strait of Georgia

START: Lat. 49° 46.9' N Long. 124° 32.1' W

END: Lat. 49° 45.8' N Long. 124° 30.0' W

GEAR: Engel 434 START TIME (PST) : 1342 DURATION (min): 30

BOTTOM DEPTH (m): Start: 310 End: 308 Est. av. Depth: 309

NET DEPTH RANGE m: 180-216 Est. av. Depth: 209

DIRECTION OF SET °true: 125 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.4

SET ON: Target 216 m WATER CONDITION: moderate chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 15 RECORDER: Keni Weir

TTM: - TDM: - BT: - OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Occasional light spotting 126 m, light scatter 162 m to bottom; light to moderate occasional spotting in scatter.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 11 SET/HAUL NO. 22

LOCATION: North Texada Island AREA: Strait of Georgia

START: Lat. 49° 43.75'N Long. 124° 41.6' W

END: Lat. 49° 44.9'N Long. 124° 43.1' W

GEAR: Engel 434 START TIME (PST) : 0826 DURATION (min): 30

BOTTOM DEPTH (m): Start: 351 End: 359 Est. av. Depth: 355

NET DEPTH RANGE m: 248-252 Est. Av. Depth: 250

DIRECTION OF SET °true: 320 SPEED kn: 3.5 DISTANCE TRAVELLED mi. 1.6

SET ON: Target 252 m WATER CONDITION: Light chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 3 RECORDER: Keni Weir

TTM: - TDM: - BT: #15 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Very light occasional spotting 126 m to bottom.

Appendix Table 1. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 11 SET/HAUL NO. 23

LOCATION: Ajax Bank AREA: Strait of Georgia

START: Lat. 49° 38.5' N Long. 124° 44.3' W

END: Lat. 49° 40.0' N Long. 124° 45.6' W

GEAR: Engel 434 START TIME (PST) : 1045 DURATION (min): 30

BOTTOM DEPTH (m): Start: 141 End: 133 Est. av. Depth: 137

NET DEPTH RANGE m: 99-106 Est. av. Depth: 103

DIRECTION OF SET °true: 330 SPEED kn: 3.5 DISTANCE TRAVELLED mi. 1.7

SET ON: Target 90 m-108 m WATER CONDITION: Light chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 3 RECORDER: Keni Weir

TTM: - TDM: - BT: #16 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Very occasional light spotting 90 m; light scatter 90 m to bottom.

VESSEL: G.B. REED DATE: Yr 75 Mo. Dec. Day 11 SET/HAUL NO. 24

LOCATION: Cook Bay AREA: Strait of Georgia

START: Lat. 49° 31.8'N Long. 124° 15.1' W

END: Lat. 49° 32.2'N Long. 124° 17.0' W

GEAR: Engel 434 START TIME (PST) : 1357 DURATION (min): 20

BOTTOM DEPTH (m): Start: 270 End: 338 Est. av. Depth: 304

NET DEPTH RANGE m: 94-88 Est. Av. Depth: 91

DIRECTION OF SET °true: 293 SPEED kn: 3 DISTANCE TRAVELLED mi. 1.4

SET ON: Target 90-99 m WATER CONDITION: Light chop TIDE: Flood

WIND DIRECTION: Southeast WIND SPEED: 5 RECORDER: Keni Weir

TTM: - TDM: - BT: #17 OTHER OCEANOGRAPHIC DATA: -

REMARKS:

SOUNDER SUMMARY: Moderate to heavy spotting 81 m-126 m; moderate scattering 108 m to bottom.

Appendix Table 2. Vertical temperature determinations (°C), December 1-12, 1975.

Depth (m)	Set no. 2	5	6	8	9	10	11	13	14	15	16	17	18	21	22	23	24
Surface	6.5	6.8	7.5	8.0	7.6	6.6	6.5	5.3	6.4	7.8	7.8	7.6	7.2	7.2	7.0	6.9	6.6
10	7.5	6.5	7.5	7.2	8.2	6.9	8.4	7.5	6.5	7.8	8.0	7.5	7.2	7.0	7.0	6.9	6.7
20	7.7	7.2	7.5	7.5	8.5	8.8	9.0	8.4	6.8	8.0	8.0	7.5	7.6	7.5	7.1	7.4	8.2
30	9.0	8.0	8.0	7.7	9.2	9.0	9.2	8.7	7.8	8.0	8.0	7.6	8.0	8.1	7.1	7.4	8.5
40	9.9	8.8	8.3	8.0	9.2	9.0	9.2	8.9	9.3	8.0	8.0	8.0	8.0	9.0	8.0	8.0	8.7
50	10.0	9.4	9.5	8.2	9.2	9.0	9.3	9.0	9.3	8.0	8.0	8.2	8.0	9.2	8.5	8.0	8.7
60	10.0	9.4	9.6	8.7	9.2	9.0	9.3	8.8	9.3	8.0	8.2	8.4	8.4	9.2	8.7	8.1	8.8
80	10.0	9.4	9.5	9.3	9.2	9.0	9.3	8.8	9.3	8.1	8.5	8.7	9.0	9.2	9.2	8.4	9.0
100	10.0	9.4	9.5	9.1	9.2	9.0	9.4	8.8	9.3	8.5	9.0	9.5	9.0	9.2	9.2	9.0	9.1
120	10.0	9.4	9.5	9.2	9.4	9.0	9.4	8.8	9.3	8.6	9.0	9.5	9.0	9.2	9.2	9.1	9.1
140	10.0	9.3	9.5	9.3	9.2	8.8	9.4	8.8	9.3	9.2	9.0	9.4	8.9	9.1	9.2	-	9.1
160	9.7	9.1	9.5	9.4	9.2	8.8	9.4	8.9	9.3	9.2	8.7	9.4	8.8	8.8	9.1	-	9.0
180	9.9	9.0	8.9	9.2	9.1	8.7	9.3	8.7	8.0	9.2	-	9.2	8.7	8.4	9.0	-	9.0
200	9.8	9.0	8.5	9.1	9.1	8.7	9.2	-	8.0	9.1	-	9.2	8.6	8.4	8.8	-	9.0
240	9.6	8.9	8.5	8.8	-	8.7	8.9	-	9.0	8.9	-	9.1	-	8.3	8.8	-	9.0
280	9.4	9.0	-	-	-	8.8	8.7	-	9.0	8.7	-	9.0	-	8.3	8.8	-	9.0

Appendix Table 3. Set information for IKMT, December 1-12, 1975.

			Yr	Mo.	Day		
VESSEL:	G.B. REED	DATE:	75	12	01	SET/HAUL NO.	1
LOCATION:	3 mi. N of Entrance Island	AREA:	Strait of Georgia				
START:	Lat. 49° 16.0' N	Long.	123° 48.1' W				
END:	Lat. 49° 13.5' N	Long.	123° 44.9' W				
GEAR:	IKMT	START TIME (PST) :	1905	DURATION (min):	60		
BOTTOM DEPTH (m):	Start: 410	End:	353	Est. av. Depth:			
NET DEPTH RANGE m:	70-75 m	Est. av. Depth:					
DIRECTION OF SET °true:	135	SPEED kn:	3.0	DISTANCE TRAVELLED mi.	3.1		
SET ON:	Target 72 m	WATER CONDITION:	Calm	TIDE:	Ebb		
WIND DIRECTION:	NIL	WIND SPEED:	NIL	RECORDER:			
TTM:		TDM: -	BT:		OTHER OCEANOGRAPHIC DATA:		

REMARKS: Wire out 240 m

SOUNDER SUMMARY: Light scatter starting at 64 m, thinning out to very light scatter halfway through tow. 40 m of wire brought in after 10 min.

			Yr	Mo.	Day		
VESSEL:	G.B. REED	DATE:	75	12	01	SET/HAUL NO.	2
LOCATION:	3 mi. N of Entrance Island	AREA:	Strait of Georgia				
START:	Lat. 49° 13.5'N	Long.	123° 44.4' W				
END:	Lat. 49° 15.9'N	Long.	123° 48.5' W				
GEAR:	IKMT	START TIME (PST) :	2035	DURATION (min):	60		
BOTTOM DEPTH (m):	Start: 335	End:	403	Est. av. Depth:			
NET DEPTH RANGE m:		Est. Av. Depth:	240 m				
DIRECTION OF SET °true:	315	SPEED kn:	3.0	DISTANCE TRAVELLED mi.	2.9		
SET ON:	Target 252 m	WATER CONDITION:	Calm	TIDE:	Ebb		
WIND DIRECTION:	NIL	WIND SPEED:	NIL	RECORDER:			
TTM:		TDM: -	BT:		OTHER OCEANOGRAPHIC DATA:		

REMARKS: Wire out 780 m

SOUNDER SUMMARY: Light scatter 234 m to 261 m, 297 m to bottom.

Appendix Table 3 (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 04 SET/HAUL NO. 3

LOCATION: 5 mi. N of Entrance Island AREA: Strait of Georgia

START: Lat. 49° 14.8' N Long. 123° 43.2' W

END: Lat. 49° 20.6' N Long. 123° 47.0' W

GEAR: IKMT START TIME (PST) : 1516 DURATION (min): 60

BOTTOM DEPTH (m): Start: 295 End: 320 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. av. Depth: 50 m

DIRECTION OF SET °true: 310 SPEED kn: 3 DISTANCE TRAVELLED mi. 4.6

SET ON: Target 50 m WATER CONDITION: _____ TIDE: _____

WIND DIRECTION: 130° WIND SPEED: 5 RECORDER: _____

TTM: _____ TDM: - BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 160 m

SOUNDER SUMMARY: Heavy scattering layer 47 m-61 m, light scattering layer 63 m-100 m.

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 04 SET/HAUL NO. 4

LOCATION: 9 mi. N of Entrance Island AREA: Strait of Georgia

START: Lat. 49° 20.6'N Long. 123° 46.5' W

END: Lat. 49° 17.6'N Long. 123° 41.0' W

GEAR: IKMT START TIME (PST) : 1728 DURATION (min): 60

BOTTOM DEPTH (m): Start: 295 End: 279 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. Av. Depth: 110 m

DIRECTION OF SET °true: 130 SPEED kn: 3 DISTANCE TRAVELLED mi. 3.7

SET ON: Target 117 m WATER CONDITION: _____ TIDE: _____

WIND DIRECTION: _____ WIND SPEED: _____ RECORDER: _____

TTM: _____ TDM: - BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 375 m

SOUNDER SUMMARY: Light scattering 108 to 126 m.

Appendix Table 3 (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 04 SET/HAUL NO. 5

LOCATION: 6 mi. off Gabriola Island AREA: Strait of Georgia

START: Lat. 49° 15.2' N Long. 123° 39.4' W

END: Lat. 49° 11.5' N Long. 123° 36.7' W

GEAR: IKMT START TIME (PST) : 1905 DURATION (min): 60

BOTTOM DEPTH (m): Start: 382 End: 389 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. av. Depth: 175 m

DIRECTION OF SET °true: 160 SPEED kn: 3 DISTANCE TRAVELLED mi. 2.8

SET ON: Target 216 m WATER CONDITION: _____ TIDE: Ebb

WIND DIRECTION: 180° WIND SPEED: 12 RECORDER: _____

TTM: _____ TDM: - BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 690 m

SOUNDER SUMMARY: Light scatter from 180-252 m. Very little on sounder after tow started.

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 05 SET/HAUL NO. 6

LOCATION: 3 mi. off Galiano Island AREA: Strait of Georgia

START: Lat. 48° 56.4'N Long. 123° 19.1' W

END: Lat. 48° 58.4'N Long. 123° 22.2' W

GEAR: IKMT START TIME (PST) : 0941 DURATION (min): 60

BOTTOM DEPTH (m): Start: 85 End: 103 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. Av. Depth: 54 m

DIRECTION OF SET °true: 310 SPEED kn: ___ DISTANCE TRAVELLED mi. _____

SET ON: Target 54 m WATER CONDITION: _____ TIDE: Ebb

WIND DIRECTION: 180° WIND SPEED: 12 RECORDER: _____

TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 175 m

SOUNDER SUMMARY: Light scattering from 46 m to bottom.

Appendix Table 3 (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 05 SET/HAUL NO. 7

LOCATION: 5 mi. off Galiano Island AREA: Strait of Georgia

START: Lat. 48° 59.4' N Long. 123° 22.2' W

END: Lat. 49° 00.7' N Long. 123° 26.5' W

GEAR: IKMT START TIME (PST) : 1100 DURATION (min): 65

BOTTOM DEPTH (m): Start: 134 End: 174 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. av. Depth: 90 m

DIRECTION OF SET °true: 310 SPEED kn: 3 DISTANCE TRAVELLED mi. _____

SET ON: Target 97 m WATER CONDITION: Rippled TIDE: Ebb

WIND DIRECTION: 180° WIND SPEED: 12 RECORDER: _____

TTM: _____ TDM: - BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 320 m

SOUNDER SUMMARY: Light scatter 42-60 m and 97-134 m midway to end of tow. Spotting present from 91 m to bottom. Light scatter 119 to 174 m.

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 08 SET/HAUL NO. 8

LOCATION: Malaspina Strait AREA: Strait of Georgia

START: Lat. 49° 38.8'N Long. 124° 12.8' W

END: Lat. 49° 41.9'N Long. 124° 15.3' W

GEAR: IKMT START TIME (PST) : 1717 DURATION (min): 60

BOTTOM DEPTH (m): Start: 295 End: 180 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. Av. Depth: 50 m

DIRECTION OF SET °true: 330 SPEED kn: 3 DISTANCE TRAVELLED mi. _____

SET ON: Target 54 m WATER CONDITION: Calm TIDE: Flood

WIND DIRECTION: _____ WIND SPEED: _____ RECORDER: _____

TTM: _____ TDM: - BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 173 m

SOUNDER SUMMARY: Light spotting 30-113 m, 220 m to bottom. Top layer separating midway through tow.

Appendix Table 3. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 08 SET/HAUL NO. 9

LOCATION: Malaspina Strait AREA: Strait of Georgia

START: Lat. 49° 42.0' N Long. 124° 15.3' W

END: Lat. 49° 39.0' N Long. 124° 13.1' W

GEAR: IKMT START TIME (PST) : 1839 DURATION (min): 60

BOTTOM DEPTH (m): Start: 184 End: 328 Est. av. Depth:

NET DEPTH RANGE m: Est. av. Depth: 120 m

DIRECTION OF SET °true: 150 SPEED kn: 3 DISTANCE TRAVELLED mi.

SET ON: Target 112 m WATER CONDITION: TIDE: Flood

WIND DIRECTION: WIND SPEED: RECORDER:

TTM: TDM: - BT: OTHER OCEANOGRAPHIC DATA:

REMARKS: Wire out 380 m

SOUNDER SUMMARY: Moderate spotting 18-55 m and 84-128 m.

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 08 SET/HAUL NO. 10

LOCATION: Malaspina Strait AREA: Strait of Georgia

START: Lat. 49° 39.2'N Long. 124° 12.8' W

END: Lat. 49° 42.4'N Long. 124° 15.7' W

GEAR: IKMT START TIME (PST) : 2005 DURATION (min): 60

BOTTOM DEPTH (m): Start: 252 End: 212 Est. av. Depth:

NET DEPTH RANGE m: 70-75 Est. Av. Depth:

DIRECTION OF SET °true: 350 SPEED kn: 2.5 DISTANCE TRAVELLED mi. 2.9

SET ON: Target 70 m WATER CONDITION: TIDE:

WIND DIRECTION: WIND SPEED: RECORDER:

TTM: TDM: - BT: OTHER OCEANOGRAPHIC DATA:

REMARKS: Wire out 230 m

SOUNDER SUMMARY: Moderate spotting from 15 to 121 m.

Appendix Table 3. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 09 SET/HAUL NO. 11

LOCATION: Mitlenatch Is. AREA: Strait of Georgia

START: Lat. 49° 57.2' N Long. 125° 04.0' W

END: Lat. 50° 00.6' N Long. 125° 05.3' W

GEAR: IKMT START TIME (PST) : 1618 DURATION (min): 60

BOTTOM DEPTH (m): Start: 277 End: 245 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. av. Depth: 120 m

DIRECTION OF SET °true: 350 SPEED kn: 2.5 DISTANCE TRAVELLED mi. 3.5

SET ON: Target 126 m WATER CONDITION: _____ TIDE: Ebb

WIND DIRECTION: _____ WIND SPEED: _____ RECORDER: _____

TTM: _____ TDM: - BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 415 m

SOUNDER SUMMARY: Light to moderate scatter from 362 to 493 m. Very light layer 126 m. Very light scatter 162 m to bottom at 234 m.

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 09 SET/HAUL NO. 12

LOCATION: Mitlenatch Is. AREA: Strait of Georgia

START: Lat. 50° 00.4'N Long. 125° 05.0' W

END: Lat. 49° 56.9'N Long. 125° 03.3' W

GEAR: IKMT START TIME (PST) : _____ DURATION (min): 50

BOTTOM DEPTH (m): Start: 250 End: 295 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. Av. Depth: 50 m

DIRECTION OF SET °true: 160 SPEED kn: 2.5 DISTANCE TRAVELLED mi. 3.5

SET ON: Target 54 m WATER CONDITION: Slight chop TIDE: Flood

WIND DIRECTION: _____ WIND SPEED: _____ RECORDER: _____

TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 173 m

SOUNDER SUMMARY: Very light scatter 18-63 m, light scatter 99 m to bottom.

Appendix Table 3. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 09 SET/HAUL NO. 13

LOCATION: Mitlenatch Is. AREA: Strait of Georgia

START: Lat. 49° 57.4' N Long. 125° 03.7' W

END: Lat. 50° 00.5' N Long. 125° 05.8' W

GEAR: IKMT START TIME (PST) : 1915 DURATION (min): 60

BOTTOM DEPTH (m): Start: 288 End: 245 Est. av. Depth:

NET DEPTH RANGE m: 150-160 Est. av. Depth:

DIRECTION OF SET °true: 340 SPEED kn: 3 DISTANCE TRAVELLED mi. 3.4

SET ON: Target 158 m WATER CONDITION: Slight chop TIDE: FLood

WIND DIRECTION: WIND SPEED: 15 Kn RECORDER:

TTM: TDM: - BT: OTHER OCEANOGRAPHIC DATA:

REMARKS: Wire out 537 m

SOUNDER SUMMARY: Light scatter from surface to 54 m, moderate scatter 144 m to bottom.

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 10 SET/HAUL NO. 14

LOCATION: Malaspina Strait AREA: Strait of Georgia

START: Lat. 49° 46.0'N Long. 124° 30.7' W

END: Lat. 49° 44.3'N Long. 124° 24.4' W

GEAR: IKMT START TIME (PST) : 1515 DURATION (min):

BOTTOM DEPTH (m): Start: 302 End: 292 Est. av. Depth:

NET DEPTH RANGE m: Est. Av. Depth: 130 m

DIRECTION OF SET °true: 112 SPEED kn: 3 DISTANCE TRAVELLED mi. 4

SET ON: Target 162 m WATER CONDITION: TIDE:

WIND DIRECTION: WIND SPEED: RECORDER:

TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:

REMARKS: Wire out 550 m

SOUNDER SUMMARY: Light scatter 144 m to bottom, Light scatter 95 m to bottom at end of tow.

Appendix Table 3. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 10 SET/HAUL NO. 15

LOCATION: Malaspina Strait AREA: Strait of Georgia

START: Lat. 49° 43.9' N Long. 124° 22.8' W

END: Lat. 49° 45.3' N Long. 124° 27.4' W

GEAR: IKMT START TIME (PST) : 1722 DURATION (min): 60

BOTTOM DEPTH (m): Start: 324 End: 313 Est. av. Depth:

NET DEPTH RANGE m: Est. av. Depth: 50

DIRECTION OF SET °true: 295 SPEED kn: 3 DISTANCE TRAVELLED mi.

SET ON: Target WATER CONDITION: Light chop TIDE: Ebb

WIND DIRECTION: WIND SPEED: RECORDER:

TTM: TDM: - BT: OTHER OCEANOGRAPHIC DATA:

REMARKS: Wire out 173 m

SOUNDER SUMMARY: Moderate scatter 36 m to 95 m, light scatter 95 m to 172 m, 198 m to bottom. End of tow very light.

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 10 SET/HAUL NO. 16

LOCATION: Malaspina Strait AREA: Strait of Georgia

START: Lat. 49° 44.9'N Long. 124° 26.1' W

END: Lat. 49° 43.4'N Long. 124° 20.4' W

GEAR: IKMT START TIME (PST) : 1840 DURATION (min): 60

BOTTOM DEPTH (m): Start: 313 End: 310 Est. av. Depth:

NET DEPTH RANGE m: Est. Av. Depth: 110 m

DIRECTION OF SET °true: 115 SPEED kn: 3 DISTANCE TRAVELLED mi. 3

SET ON: Target 126 m WATER CONDITION: TIDE:

WIND DIRECTION: WIND SPEED: RECORDER:

TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:

REMARKS: Wire out 430 m

SOUNDER SUMMARY: Light scatter-surface to bottom. Moderate scatter 22 to 144 m and light scatter 198 m to bottom at end of tow.

Appendix Table 3. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 11 SET/HAUL NO. 17

LOCATION: Sisters Island AREA: Strait of Georgia

START: Lat. 49° 23.7' N Long. 124° 19.7' W

END: Lat. 49° 25.6' N Long. 124° 23.0' W

GEAR: IKMT START TIME (PST): 1713 DURATION (min): 60

BOTTOM DEPTH (m): Start: 270 End: 342 Est. av. Depth:

NET DEPTH RANGE m: Est. av. Depth: 45 m

DIRECTION OF SET °true: 307 SPEED kn: 3 DISTANCE TRAVELLED mi.

SET ON: Target 54 m WATER CONDITION: TIDE: Ebb

WIND DIRECTION: 300° WIND SPEED: 9 kn RECORDER:

TTM: TDM: - BT: OTHER OCEANOGRAPHIC DATA:

REMARKS: Wire out 175 m

SOUNDER SUMMARY: Light scatter 22-144 m and 198 m to bottom. Scatter separated into 2 layers at end of tow. Surface to 36 m and 83 m-126 m.

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 11 SET/HAUL NO. 18

LOCATION: Sisters Island AREA: Strait of Georgia

START: Lat. 49° 25.3'N Long. 124° 22.5' W

END: Lat. 49° 22.8'N Long. 124° 16.2' W

GEAR: IKMT START TIME (PST): 1837 DURATION (min): 60

BOTTOM DEPTH (m): Start: 342 End: 313 Est. av. Depth:

NET DEPTH RANGE m: Est. Av. Depth: 80 m

DIRECTION OF SET °true: 127 SPEED kn: 3 DISTANCE TRAVELLED mi.

SET ON: WATER CONDITION: TIDE: Ebb - Flood

WIND DIRECTION: 315° WIND SPEED: RECORDER:

TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:

REMARKS: Wire out 330 m

SOUNDER SUMMARY: Light scatter surface to 36 m, 83-126 m and 216 m to bottom. At end of tow middle layer extending to 144 m.

Appendix Table 3. (cont'd)

VESSEL: G.B. REED DATE: Yr 75 Mo. 12 Day 11 SET/HAUL NO. 19

LOCATION: Sangster Island AREA: Strait of Georgia

START: Lat. 49° 23.3' N Long. 124° 17.5' W

END: Lat. 49° 25.4' N Long. 124° 22.0' W

GEAR: IKMT START TIME (PST) : 2010 DURATION (min): 60

BOTTOM DEPTH (m): Start: 256 End: 346 Est. av. Depth: _____

NET DEPTH RANGE m: _____ Est. av. Depth: 177 m

DIRECTION OF SET °true: 307 SPEED kn: 4 DISTANCE TRAVELLED mi. 4

SET ON: Target 180 m WATER CONDITION: moderate chop TIDE: Flood

WIND DIRECTION: 315° WIND SPEED: 14 kn RECORDER: _____

TTM: _____ TDM: - BT: _____ OTHER OCEANOGRAPHIC DATA: _____

REMARKS: Wire out 650 m

SOUNDER SUMMARY: Light scatter from surface to 36 m and 83 m to 144 m. Very light scatter with few spots from 162 m to bottom.

Appendix Table 4. Length frequency of Leuroglossus stilbius schmidti captured using the IKMT, December 1-12, 1975.

Length (mm)	Set no. 1	2	3	4	5	6	7	11	14	15	16	17	18	19	Total
20	-	1	-	-	1	-	-	-	-	-	-	-	-	-	2
21	-	1	-	-	0	-	-	1	-	-	-	-	-	-	2
22	-	4	-	-	1	-	-	-	2	-	-	-	-	-	7
23	-	2	-	-	0	1	-	-	0	-	-	-	-	-	3
24	-	1	-	-	0	1	2	-	0	-	-	-	-	-	4
25	-	5	-	3	0	2	1	-	1	-	-	-	-	-	12
26	-	2	11	0	0	0	0	-	-	-	-	-	-	-	13
27	-	1	12	2	0	0	1	-	-	-	-	-	1	-	17
28	-	0	15	1	0	1	-	-	-	1	-	-	2	-	20
29	-	3	0	0	0	-	-	-	-	-	-	-	1	-	4
30	-	2	1	0	0	-	-	-	-	-	-	-	0	-	3
31	-	1	-	0	0	-	-	-	-	-	-	-	0	-	1
32	-	1	-	0	0	-	-	-	-	-	-	-	0	-	1
33	-	0	-	0	0	-	-	-	-	-	-	-	0	-	0
34	-	0	-	0	0	-	-	-	-	-	-	-	0	-	0
35	-	0	-	0	0	-	-	-	-	-	-	-	0	-	0
36	-	0	-	0	0	-	-	-	-	-	-	-	0	-	0
37	-	0	-	0	0	-	-	-	-	-	-	-	0	-	0
38	-	0	-	0	0	-	-	-	-	-	-	1	1	-	2
39	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
40	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
41	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
42	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
43	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
44	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
45	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
46	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
47	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
48	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
49	-	1	-	0	0	-	-	-	-	-	-	0	0	-	1
50	-	0	-	1	0	-	-	-	-	-	1	0	0	-	2
51	-	1	-	0	0	-	-	-	-	-	-	0	0	-	1
52	-	0	-	0	0	-	-	-	-	-	-	0	0	-	0
53	-	2	-	0	1	-	-	-	-	-	-	1	0	-	4
54	-	0	-	0	0	-	-	-	-	-	-	1	0	-	1
55	-	0	-	-	0	-	-	-	-	-	-	1	0	-	1
56	-	0	-	-	0	-	-	-	-	-	-	0	0	-	0
57	-	0	-	-	0	-	-	-	-	-	-	0	0	-	0
58	1	1	-	-	0	-	-	-	-	-	-	0	1	-	3
59	-	0	-	-	0	-	-	-	-	-	-	0	1	-	1
60	-	0	-	-	1	-	-	-	-	-	-	0	0	-	1
61	-	0	-	-	0	-	-	-	-	-	-	0	0	-	0
62	-	1	-	-	0	-	-	-	-	-	-	0	0	-	1
63	-	0	-	-	1	-	-	-	-	-	-	2	0	1	4
64	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
65	-	1	-	-	0	-	-	-	-	-	-	-	1	0	2

Appendix Table 4. (cont'd)

Length (mm)	Set no. 1	2	3	4	5	6	7	11	14	15	16	17	18	19	Total
66	-	0	-	-	0	-	-	-	-	-	-	-	1	0	1
67	-	0	-	-	1	-	-	-	-	-	-	-	0	0	1
68	-	0	-	-	0	-	-	-	-	-	-	-	1	1	2
69	-	0	-	-	0	-	-	-	-	-	-	-	1	0	1
70	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
71	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
72	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
73	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
74	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
75	-	0	-	-	1	-	-	-	-	-	-	-	0	0	1
76	-	0	-	-	1	-	-	-	-	-	-	-	0	0	1
77	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
78	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
79	-	0	-	-	0	-	-	-	-	-	-	-	1	0	1
80	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
81	-	0	-	-	1	-	-	-	-	-	-	-	0	0	1
82	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
83	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
84	-	0	-	-	1	-	-	-	-	-	-	-	0	0	1
85	-	2	-	-	0	-	-	-	-	-	-	-	0	0	2
86	-	0	-	-	0	-	-	-	-	-	-	-	0	1	1
87	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
88	-	1	-	-	0	-	-	-	-	-	-	-	0	0	1
89	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
90	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
91	-	0	-	-	0	-	-	-	-	-	-	-	0	0	0
92	-	0	-	-	0	-	-	-	-	-	-	-	0	1	1
93	-	1	-	-	1	-	-	-	-	-	-	-	0	-	2
94	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
95	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Total	1	35	39	7	11	5	4	1	3	1	1	6	13	4	131

Appendix Table 5. Length frequency of Pacific hake and pallid eelpout captured using the IKMT, December 1-12, 1975.

Set no.	Pacific hake									Pallid eelpout					
Length (mm)	1	4	5	13	16	17	18	19	Total	2	4	5	6	16	Total
36	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
37	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
38	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
39	-	-	-	-	-	-	-	-	-	-	-	1	1	-	2
40	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
41	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
42	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
43	-	1	-	-	-	-	-	-	1	-	-	0	-	-	0
44	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
45	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
46	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
47	-	0	-	-	-	-	-	-	0	-	1	0	-	-	1
48	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
49	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
50	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
51	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
52	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
53	-	0	-	-	-	-	-	-	0	-	-	0	-	-	0
54	-	1	-	-	-	-	-	-	1	-	-	0	-	-	0
55	-	0	-	-	-	-	1	-	1	-	-	0	-	-	0
56	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
57	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
58	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
59	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
60	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
61	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
62	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
63	-	0	-	-	1	-	0	-	1	-	-	0	-	-	0
64	1	0	-	-	-	-	0	-	1	-	-	0	-	-	0
65	0	0	-	-	-	-	0	-	0	-	-	0	-	-	0
66	0	0	-	-	-	-	0	-	0	-	-	0	-	-	0
67	0	0	-	-	-	-	0	-	0	-	-	0	-	-	0
68	1	3	-	-	-	-	0	-	4	-	-	0	-	-	0
69	-	1	-	-	-	-	0	-	1	-	-	0	-	-	0
70	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
71	-	1	1	-	-	-	0	-	2	-	-	0	-	-	0
72	-	0	-	-	-	-	0	-	0	-	-	0	-	-	0
73	-	1	-	-	-	-	0	-	1	-	-	0	-	-	0
74	-	-	-	-	-	1	1	-	2	-	-	0	-	-	0
75	-	-	-	-	-	-	1	-	1	-	-	0	-	-	0
76	-	-	-	-	-	-	0	-	0	-	-	0	-	-	0
77	-	-	-	-	-	-	0	-	0	-	-	0	-	-	0
78	-	-	-	-	-	-	0	-	0	-	-	2	-	-	2
79	-	-	-	-	-	-	2	-	2	-	-	1	-	-	1

Appendix Table 5 (cont'd)

Set no. / Length (mm)	Pacific hake									Pallid eelpout					
	1	4	5	13	16	17	18	19	Total	2	4	5	6	16	Total
80	-	-	-	-	-	-	0	-	0	-	-	0	-	-	0
81	-	-	-	-	-	-	0	-	0	-	-	0	-	-	0
82	-	-	-	-	-	-	0	-	0	-	-	1	-	-	1
83	-	-	-	-	-	-	0	-	0	-	-	0	-	-	0
84	-	-	-	-	-	-	0	-	0	-	-	1	-	-	1
85	-	-	-	1	-	-	0	1	2	-	-	-	-	-	0
86	-	-	-	-	-	-	0	-	0	-	-	-	-	-	0
87	-	-	-	-	-	-	0	-	0	-	-	-	-	-	0
88	-	-	-	-	-	-	1	-	1	-	-	-	-	-	0
89	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
95	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	2	8	1	1	1	1	6	1	21	1	1	7	2	1	12

Appendix Table 6. Length frequency of eulachon and northern lampfish captured using tne IKMT, December 1-12, 1975.

Set no.	Eulachon													Northern lampfish		
Length (mm)	1	4	5	7	9	10	11	14	15	16	17	18	Total	2	5	Total
41	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
42	0	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
43	1	-	-	-	1	-	-	1	-	-	-	-	3	-	-	-
44	1	-	-	-	-	-	-	0	1	-	-	-	2	-	-	-
45	1	-	1	1	-	-	-	0	-	-	-	-	3	-	-	-
46	0	-	0	1	-	-	1	0	-	-	-	-	2	-	-	-
47	0	-	0	1	-	-	-	0	-	-	-	-	1	-	-	-
48	0	1	1	4	-	-	-	0	-	-	1	1	8	-	-	-
49	0	-	-	-	-	1	-	0	-	-	0	0	1	-	-	-
50	0	-	-	-	-	-	-	1	-	1	1	0	3	-	1	1
51	0	-	-	-	-	-	-	-	-	-	0	1	1	1	0	1
52	1	-	-	-	-	-	-	-	-	-	1	-	2	1	0	1
53	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
54	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
55	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
56	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
57	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
58	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
59	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
60	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
61	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
62	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	2
63	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3	3
64	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
65	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Total	5	1	2	7	1	1	1	2	1	1	3	2	27	11	5	16

Appendix Table 7. Length frequency of snailfish captured using the IKMT, December 1-12, 1975.

	Tadpole snailfish											Non-disked snailfish				Disked snailfish			
Set no. Length (mm)	2	5	6	11	13	14	15	16	17	19	Total	2	3	9	Total	1	12	15	Total
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
25	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	0
26	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	-	-	-	0
27	-	-	-	-	-	-	1	-	-	-	1	0	-	-	0	-	-	-	0
28	-	-	-	-	-	-	-	-	-	-	0	0	1	-	1	-	-	-	0
29	-	-	2	-	-	-	-	-	-	-	2	0	1	-	1	-	-	-	0
30	-	-	0	-	-	-	-	1	-	-	1	0	1	-	1	-	-	-	0
31	-	-	0	-	-	-	-	-	-	-	0	0	0	-	0	-	-	-	0
32	-	1	1	1	-	-	-	-	-	-	3	0	0	-	0	-	-	-	0
33	-	0	-	0	1	2	-	-	-	-	3	0	0	-	0	-	-	-	0
34	-	0	-	0	1	0	-	-	-	-	1	0	0	-	0	-	-	-	0
35	-	0	-	0	0	1	-	-	-	-	1	0	1	-	1	-	-	-	0
36	-	0	-	0	0	0	-	-	-	-	0	1	0	-	1	-	-	-	0
37	-	0	-	0	0	0	-	-	-	-	0	-	0	-	0	-	-	-	0
38	-	2	-	0	1	1	-	-	1	-	5	-	0	-	0	-	-	-	0
39	-	0	-	0	0	-	-	-	-	-	0	-	0	-	0	1	-	-	1
40	-	0	-	0	1	-	-	-	-	1	2	-	0	-	0	-	-	-	-
41	-	1	-	1	1	-	-	-	-	0	3	-	1	-	1	-	-	-	-
42	-	0	-	0	1	-	-	-	-	0	1	-	0	-	0	-	-	-	-
43	-	0	-	0	1	-	-	-	-	0	1	-	1	-	1	-	-	-	-
44	-	0	-	0	1	-	-	-	-	0	1	-	2	-	2	-	-	-	-
45	-	0	-	0	2	-	-	-	-	0	2	-	0	-	0	-	-	-	-
46	-	0	-	0	1	-	-	-	-	0	1	-	0	-	0	-	-	-	-
47	-	0	-	0	1	-	-	-	-	0	1	-	0	-	0	-	-	-	-
48	1	0	-	0	2	-	-	-	-	0	3	-	0	-	0	-	-	-	-
49	0	0	-	0	0	-	-	-	-	0	0	-	0	-	0	-	-	-	-

Appendix Table 7. (cont'd)

	Tadpole snailfish											Non-disked snailfish				Disked snailfish			
Set no. Length (mm)	2	5	6	11	13	14	15	16	17	19	Total	2	3	9	Total	1	12	15	Total
50	0	1	-	1	1	-	-	-	-	1	4	-	1	-	1	-	-	-	-
51	0	0	-	-	3	-	-	-	-	0	3	-	-	2	2	-	-	-	-
52	0	0	-	-	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
53	0	0	-	-	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
54	0	1	-	-	1	-	-	-	-	0	2	-	-	-	-	-	-	-	-
55	1	0	-	-	-	-	-	-	-	0	1	-	-	-	-	-	-	-	-
56	0	0	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
57	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
58	0	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
59	0	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
60	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Total	3	8	3	3	19	14	1	1	1	3	46	2	9	2	13	1	2	2	5

Appendix Table 8. Length frequency of kelp greenling and soft sculpin captured using the IKMT, December 1-12, 1975.

	Kelp greenling						Soft sculpin								
Set no. Length (mm)	12	13	14	15	16	Total	1	2	4	7	9	11	12	16	Total
7	4	-	1	-	-	5	-	-	-	-	-	-	-	-	-
8	6	-	1	1	-	8	-	-	-	-	-	-	-	-	-
9	5	-	0	0	-	5	-	-	-	-	-	-	-	-	-
10	5	-	1	0	1	7	-	-	-	-	-	-	-	-	-
11	1	-	0	0	-	1	-	-	-	-	-	-	-	-	-
12	5	2	1	0	-	8	-	-	-	-	-	-	-	-	-
13	12	2	0	0	-	14	-	-	-	-	-	-	-	-	-
14	9	1	0	1	-	11	-	-	-	-	-	-	-	-	-
15	7	1	1	2	-	11	-	-	-	-	-	-	-	1	1
16	4	-	-	-	-	4	-	-	-	-	-	-	-	-	0
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
18	-	-	-	-	-	-	-	-	-	-	-	1	1	-	2
19	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
20	-	-	-	-	-	-	-	0	-	-	1	-	-	-	1
21	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
22	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
24	-	-	-	-	-	-	1	-	-	1	-	-	-	-	2
25	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
26	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
27	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
28	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
30	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Total	58	6	5	4	1	74	3	4	1	1	1	1	1	1	13

Appendix Table 9. Length frequency of hake, December 1-12, 1975.

Fork Length (cm)	Set no. 1			2			3			4			5		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
8	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
9	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
10	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
11	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
12	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
13	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
14	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
15	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
16	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
17	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
18	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-
19	-	-	1	0	-	0	-	-	-	-	-	-	-	-	-
20	0	-	0	0	-	0	-	-	-	-	-	-	-	-	-
21	4	2	6	0	1	1	-	-	-	-	-	-	-	-	-
22	2	0	2	0	0	0	-	-	-	-	-	-	-	-	-
23	2	0	2	0	0	0	-	-	-	-	-	-	-	-	-
24	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-
25	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-
26	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-
27	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-
28	1	0	1	0	0	0	-	1	1	-	-	-	-	-	-
29	0	0	0	0	0	0	-	0	0	-	-	-	-	-	-
30	0	0	0	0	0	0	-	0	0	-	-	-	-	-	-
31	0	0	0	0	0	0	-	0	0	-	-	-	-	-	-
32	0	0	0	0	0	0	-	0	0	-	-	-	-	-	-
33	0	0	0	0	0	0	-	0	0	-	-	-	-	-	-
34	0	0	0	0	0	0	1	0	1	-	-	-	-	-	-
35	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
36	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
37	0	0	0	0	0	0	0	0	0	-	-	-	3	1	4
38	0	0	0	0	0	0	0	0	0	-	-	-	2	0	2
39	0	0	0	0	0	0	1	1	2	2	-	2	5	3	8
40	1	0	1	0	0	0	1	0	1	2		2	1	0	1
41	0	0	0	0	0	0	0	0	0	6		6	9	3	12
42	0	0	0	0	0	0	2	0	2	9	2	11	19	5	24
43	2	0	2	1	0	1	2	1	3	17	5	22	18	5	23
44	1	4	5	0	0	0	3	1	4	18	4	22	31	7	38
45	1	1	2	1	0	1	3	0	3	23	7	30	28	10	38
46	1	1	2	1	1	2	0	4	4	5	5	10	22	11	33
47	1	0	1	1	2	3	1	1	2	8	3	11	12	3	15
48	-	2	2	1	0	1	-	1	1	2	1	3	3	8	11
49	-	0	0	-	1	1	-	-	-	3	0	3	3	1	4

Appendix Table 9. (cont'd)

Fork Length (cm)	Set no. 1			2			3			4			5		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
50	-	0	0	-	-	-	-	-	-	1	1	2	-	2	2
51	-	1	1	-	-	-	-	-	-	-	0	0	-	-	-
52	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	17	11	28	6	5	11	14	10	24	96	29	125	156	59	215

Appendix Table 9. (cont'd)

Fork Length (cm)	Set no. 6			7			8			9			10		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
20	-	-	-	-	1	1	1	0	1	-	-	-	-	-	-
21	-	-	-	1	0	1	2	1	3	-	-	-	-	-	-
22	-	-	-	2	1	3	1	0	1	-	-	-	-	1	1
23	-	-	-	0	0	0	0	1	1	-	-	-	-	0	0
24	-	-	-	2	1	3	1	0	1	-	-	-	-	0	0
25	1	-	1	1	0	1	1	0	1	-	-	-	-	1	1
26	0	-	0	0	0	0	0	0	0	-	-	-	-	0	0
27	0	-	0	0	0	0	0	0	0	-	-	-	-	0	0
28	0	-	0	0	0	0	0	0	0	-	-	-	-	0	0
29	0	-	0	0	0	0	0	0	0	-	-	-	-	0	0
30	0	-	0	0	0	0	0	0	0	-	-	-	1	0	1
31	0	-	0	0	0	0	0	0	0	-	-	-	0	0	0
32	0	-	0	0	0	0	0	0	0	-	-	-	0	0	0
33	1	-	1	0	0	0	0	0	0	-	-	-	0	0	0
34	1	1	2	0	1	1	0	0	0	-	-	-	0	0	0
35	1	3	4	0	0	0	0	0	0	-	-	-	0	0	0
36	0	0	0	0	0	0	0	0	0	-	-	-	0	0	0
37	4	1	5	0	0	0	0	0	0	-	-	-	0	0	0
38	2	6	8	0	1	1	0	0	0	-	-	-	0	0	0
39	4	3	7	0	0	0	0	0	0	-	-	-	0	0	0
40	9	5	14	0	0	0	0	0	0	-	-	-	0	0	0
41	15	5	20	0	0	0	2	1	3	-	-	-	0	0	0
42	31	7	38	2	0	2	1	0	1	-	-	-	1	0	1
43	43	15	58	0	0	0	3	0	3	-	-	-	1	0	1
44	57	22	79	1	0	1	2	3	5	1	-	1	-	0	0
45	47	34	81	4	0	4	3	2	5	-	2	2	-	1	1
46	26	24	50	1	2	3	0	3	3	-	1	1	-	1	1
47	19	18	37	0	1	1	1	1	2	-	1	1	-	2	2
48	10	11	21	1	4	5	1	3	4	-	2	2	-	-	-
49	1	12	13	-	4	4	-	2	2	-	1	1	-	-	-

Appendix Table 9. (cont'd)

Fork Length (cm)	Set no. 6			7			8			9			10		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
50	0	6	6	-	1	1	-	2	2	-	0	0	-	-	-
51	1	1	2	-	-	-	-	1	1	-	1	1	-	-	-
52	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
53	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	273	177	450	15	17	32	19	21	40	1	8	9	3	6	9

Appendix Table 9. (cont'd)

Fork Length (cm)	Set no. 11			13			14			15			16		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-
22	-	-	-	-	-	-	0	-	0	-	-	-	-	-	-
23	-	-	-	-	1	1	0	-	0	-	-	-	-	-	-
24	-	-	-	-	0	0	0	-	0	-	-	-	-	-	-
25	-	-	-	-	0	0	0	-	0	-	-	-	-	-	-
26	-	-	-	-	1	1	1	1	2	-	-	-	-	-	-
27	-	-	-	-	0	0	0	1	1	-	-	-	-	-	-
28	-	-	-	-	0	0	1	0	1	-	-	-	-	-	-
29	-	-	-	-	0	0	0	0	0	1	-	1	-	-	-
30	-	-	-	-	0	0	0	1	1	0	1	1	-	-	-
31	-	-	-	-	0	0	0	1	1	0	0	0	-	-	-
32	-	-	-	-	0	0	0	0	0	0	2	2	-	-	-
33	-	-	-	-	0	0	0	0	0	1	1	2	-	-	-
34	-	-	-	-	0	0	0	0	0	1	2	3	-	1	1
35	-	-	-	-	0	0	1	0	1	3	0	3	-	0	0
36	-	-	-	-	0	0	0	1	1	0	1	1	-	0	0
37	-	-	-	-	0	0	2	1	3	3	6	9	-	0	0
38	-	-	-	-	0	0	0	1	1	3	4	7	-	0	0
39	-	-	-	-	0	0	2	2	4	1	0	1	-	0	0
40	-	-	-	-	0	0	2	1	3	1	3	4	-	0	0
41	-	-	-	-	0	0	4	0	4	3	3	6	-	0	0
42	-	-	-	-	0	0	5	1	6	4	3	7	-	0	0
43	-	-	-	-	1	1	8	2	10	4	7	11	-	0	0
44	-	-	-	-	0	0	13	4	17	3	9	12	1	0	1
45	-	-	-	-	0	0	15	7	22	5	18	23	0	0	0
46	-	-	-	-	0	0	4	3	7	7	16	23	0	0	0
47	-	-	-	-	1	1	3	7	10	1	13	14	0	5	5
48	-	-	-	-	0	0	2	1	3	3	18	21	3	5	8
49	-	-	-	-	1	1	-	1	1	1	16	17	-	4	4

Appendix Table 9. (cont'd)

Fork Length (cm)	Set no. 11			13			14			15			16		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
50	-	-	-	-	1	1	-	2	2	-	8	8	-	3	3
51	-	-	-	-	1	1	-	-	-	-	6	6	-	5	5
52	-	-	-	-	0	0	-	-	-	-	7	7	-	3	3
53	-	-	-	-	0	0	-	-	-	-	2	2	-	2	2
54	-	-	-	-	0	0	-	-	-	-	3	3	-	4	4
55	-	-	-	-	0	0	-	-	-	-	0	0	-	4	4
56	-	-	-	-	1	1	-	-	-	-	0	0	-	0	0
57	-	-	-	-	0	0	-	-	-	-	0	0	-	0	0
58	-	-	-	-	0	0	-	-	-	-	0	0	-	1	1
59	-	-	-	-	0	0	-	-	-	-	1	1	-	0	0
60	-	-	-	-	0	0	-	-	-	-	1	1	-	3	3
61	-	-	-	-	0	0	-	-	-	-	-	-	-	0	0
62	-	-	-	-	0	0	-	-	-	-	-	-	-	1	1
63	-	-	-	-	0	0	-	-	-	-	-	-	-	0	0
64	-	-	-	-	0	0	-	-	-	-	-	-	-	0	0
65	-	-	-	-	0	0	-	-	-	-	-	-	-	0	0
66	-	-	-	-	0	0	-	-	-	-	-	-	-	1	1
67	-	-	-	-	0	0	-	-	-	-	-	-	-	0	0
68	-	-	-	-	0	0	-	-	-	-	-	-	-	1	1
69	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-
70	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-
71	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-
72	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-
73	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Total	0	1	1	0	9	9	65	38	103	45	151	196	4	43	47

Appendix Table 9. (cont'd)

Fork Length (cm)	Set no. 17			18			19			20			21		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	1	-	1	-	-	-	-	2	2
21	-	-	-	-	-	-	0	-	0	-	-	-	3	0	3
22	-	-	-	-	-	-	0	-	0	-	-	-	3	2	5
23	-	-	-	-	-	-	0	1	1	-	-	-	1	0	1
24	-	-	-	-	-	-	0	0	0	-	-	-	0	3	3
25	-	-	-	-	-	-	1	0	1	-	-	-	1	1	2
26	-	-	-	-	-	-	0	0	0	-	-	-	0	2	2
27	-	-	-	-	-	-	0	0	0	-	-	-	0	0	0
28	-	-	-	-	-	-	0	0	0	-	-	-	1	1	2
29	-	-	-	-	-	-	0	1	1	-	-	-	1	0	1
30	-	-	-	-	-	-	0	0	0	-	-	-	0	1	1
31	-	-	-	-	-	-	1	1	2	-	-	-	2	1	3
32	-	-	-	-	-	-	0	1	1	-	-	-	2	1	3
33	-	-	-	-	-	-	0	2	2	-	-	-	3	0	3
34	-	-	-	-	-	-	0	2	2	-	-	-	2	2	4
35	-	-	-	-	-	-	2	0	2	-	-	-	5	0	5
36	-	-	-	2	-	2	2	1	3	-	-	-	3	3	6
37	-	-	-	0	-	0	0	2	2	-	-	-	1	1	2
38	-	-	-	0	2	2	0	0	0	-	-	-	11	2	13
39	-	2	2	3	0	3	1	1	2	-	-	-	7	4	11
40		0	0	1	3	4	0	0	0	-	-	-	3	5	8
41	4	0	4	4	5	9	2	1	3	-	-	-	6	3	9
42	5	1	6	10	1	11	4	0	4	-	1	1	7	10	17
43	19	3	22	13	10	23	1	2	3	2	0	2	15	9	24
44	31	13	44	46	19	65	10	7	17	0	0	0	16	14	30
45	31	25	56	49	23	72	3	6	9	1	0	1	12	17	29
46	24	31	55	49	45	94	4	7	11	1	0	1	15	19	34
47	21	54	75	39	46	85	5	9	14	-	1	1	2	11	13
48	15	41	56	28	49	77	4	13	17	-	-	-	4	4	8
49	8	24	32	16	41	57	4	12	16	-	-	-	1	5	6

Appendix Table 9. (cont'd)

Fork Length (cm)	Set no. 17			18			19			20			21		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
50	7	28	35	8	28	36	2	7	9	-	-	-	1	3	4
51	4	12	16	5	26	31	0	5	5	-	-	-	-	-	-
52	1	4	5	1	12	13	1	3	4	-	-	-	-	-	-
53	0	4	4	0	9	9	1	0	1	-	-	-	-	-	-
54	1	8	9	2	2	4	-	1	1	-	-	-	-	-	-
55	0	1	1	-	2	2	-	0	0	-	-	-	-	-	-
56	0	-	0	-	1	1	-	0	0	-	-	-	-	-	-
57	0	-	0	-	1	1	-	1	1	-	-	-	-	-	-
58	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
59	1	-	1	-	-	-	-	-	-	-	-	-	-	-	
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	172	251	423	276	325	601	49	86	135	4	2	6	128	126	254

Appendix Table 9 (cont'd)

Fork length (cm)	Set no. 22 M	22 F	22 T	23 M	23 F	23 T	24 M	24 F	24 T	Total M	Total F	Total T
8	-	-	-	-	-	-	-	-	-	1	-	1
9	-	-	-	-	-	-	-	-	-	0	-	0
10	-	-	-	-	-	-	-	-	-	0	-	0
11	-	-	-	-	-	-	-	-	-	0	-	0
12	-	-	-	-	-	-	-	-	-	0	-	0
13	-	-	-	-	-	-	-	-	-	0	-	0
14	-	-	-	-	-	-	-	-	-	0	-	0
15	-	-	-	-	-	-	-	-	-	0	-	0
16	-	-	-	-	-	-	-	-	-	0	-	0
17	-	-	-	-	-	-	-	-	-	0	-	0
18	-	-	-	-	-	-	-	-	-	0	-	0
19	-	-	-	-	-	-	-	-	-	1	1	2
20	-	-	-	-	-	-	-	-	-	2	4	6
21	-	1	1	-	-	-	-	-	-	12	5	17
22	-	1	1	-	-	-	-	-	-	8	5	13
23	2	0	2	-	-	-	-	-	-	5	3	8
24	2	3	5	-	-	-	-	-	-	5	7	12
25	1	0	1	-	-	-	-	-	-	6	2	8
26	0	0	0	-	-	-	-	-	-	1	4	5
27	0	0	0	-	-	-	-	-	-	0	1	1
28	1	0	1	-	-	-	-	-	-	4	2	6
29	1	0	1	-	-	-	-	-	-	3	1	4
30	1	0	1	-	-	-	-	-	-	2	3	5
31	0	0	0	-	-	-	-	-	-	3	3	6
32	0	0	0	-	-	-	-	1	1	2	5	7
33	0	0	0	-	-	-	-	0	0	5	3	8
34	0	0	0	-	-	-	1	4	5	6	13	19
35	0	0	0	-	-	-	1	2	3	13	5	18
36	0	0	0	-	-	-	3	2	5	10	8	18
37	0	0	0	-	-	-	7	5	12	20	17	37
38	0	0	0	-	-	-	11	8	19	29	24	53
39	0	0	0	-	-	-	13	7	20	39	23	62
40	0	0	0	-	-	-	13	10	23	34	27	61
41	0	0	0	-	-	-	9	5	14	64	26	90
42	1	0	1	-	1	1	32	11	43	133	43	176
43	1	1	2	-	0	0	38	15	53	188	76	264
44	2	3	5	1	1	2	35	30	65	272	141	413
45	0	2	2	-	2	2	30	22	52	256	179	435
46	1	2	3	-	4	4	30	13	43	191	193	384
47	0	2	2	-	4	4	22	23	45	136	208	344
48	1	2	3	-	5	5	4	5	9	82	175	257
49	-	2	2	-	3	3	6	5	11	43	135	178

Appendix Table 9 (cont'd)

Fork length (cm)	Set no. 22			23			24			Total		
	M	F	T	M	F	T	M	F	T	M	F	T
50	-	-	-	-	6	6	2	1	3	21	99	120
51	-	-	-	-	5	5	1	1	2	11	65	76
52	-	-	-	-	3	3	-	1	1	3	35	38
53	-	-	-	-	2	2	-	1	1	1	22	23
54	-	-	-	-	0	0	-	-	-	3	18	21
55	-	-	-	-	2	2	-	-	-	0	9	9
56	-	-	-	-	0	0	-	-	-	0	2	2
57	-	-	-	-	0	0	-	-	-	0	2	2
58	-	-	-	-	0	0	-	-	-	0	1	1
59	-	-	-	-	0	0	-	-	-	1	1	2
60	-	-	-	-	1	1	-	-	-	-	5	5
61	-	-	-	-	-	-	-	-	-	-	0	0
62	-	-	-	-	-	-	-	-	-	-	1	1
63	-	-	-	-	-	-	-	-	-	-	0	0
64	-	-	-	-	-	-	-	-	-	-	0	0
65	-	-	-	-	-	-	-	-	-	-	0	0
66	-	-	-	-	-	-	-	-	-	-	1	1
67	-	-	-	-	-	-	-	-	-	-	0	0
68	-	-	-	-	-	-	-	-	-	-	1	1
69	-	-	-	-	-	-	-	-	-	-	0	0
70	-	-	-	-	-	-	-	-	-	-	0	0
71	-	-	-	-	-	-	-	-	-	-	0	0
72	-	-	-	-	-	-	-	-	-	-	0	0
73	-	-	-	-	-	-	-	-	-	-	1	1
Total	14	19	33	1	39	40	258	172	430	1616	1605	3221

Appendix Table 10. Length frequency of pollock, December 1-12, 1975.

Fork length (cm)	Set no. 1			2			3			4			5		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
22	-	-													
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
31	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
32	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
33	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
34	-	-	-	1	-	1	-	-	-	-	1	1	1	0	1
35	-	-	-	0	1	1	-	-	-	1	1	2	5	2	7
36	-	-	-	2	0	2	6	2	8	4	2	6	10	4	14
37	-	-	-	0	0	0	4	4	8	3	3	6	7	6	13
38	-	-	-	2	0	2	3	2	5	4	1	5	7	8	15
39	1	-	1	1	1	2	0	2	2	2	1	3	4	3	7
40	0	-	0	0	3	3	1	1	2	3	1	4	8	5	13
41	1	-	1	0	0	0	1	1	2	1	0	1	4	3	7
42	-	-	0	1	1	2	0	0	0	1	0	1	5	0	5
43	-	-	0	-	1	1	2	0	2	2	1	3	3	3	6
44	-	-	0	-	2	2	-	1	1	1	0	1	4	4	8
45	-	1	1	-	1	1	-	-	-	-	0	0	2	3	5
46	-	-	-	-	-	-	-	-	-	-	0	0	3	3	6
47	-	-	-	-	-	-	-	-	-	-	1	1	-	3	3
48	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
49	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
50	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
51	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	1	3	7	10	17	17	13	30	22	12	34	64	52	116

Appendix Table 10. (cont'd)

Fork length (cm)	Set no. 6			7			8			9			10		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
35	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
36	-	2	2	-	-	-	-	-	-	-	-	-	0	-	0
37	1	1	2	-	-	-	-	-	-	-	-	-	0	-	0
38	0	0	0	-	-	-	-	-	-	-	-	-	0	-	0
39	2	0	2	-	-	-	-	-	-	-	-	-	0	1	1
40	0	0	0	1	-	1	-	1	1	1	-	1	0	0	0
41	2	1	3	0	-	0	-	-	-	-	-	-	1	0	1
42	1	0	1	1	-	1	-	-	-	-	-	-	0	0	0
43	2	3	5	0	-	0	-	-	-	-	-	-	1	0	1
44	4	2	6	1	-	1	-	-	-	-	-	-	-	1	1
45	0	1	1	1	-	1	-	-	-	-	-	-	-	-	-
46	1	1	2	-	-	0	-	-	-	-	-	-	-	-	-
47	-	3	3	-	-	0	-	-	-	-	-	-	-	-	-
48	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	13	14	27	4	1	5	0	1	1	1	0	1	3	2	5

Appendix Table 10. (cont'd)

Fork length (cm)	Set no. 11			12			13			14			15		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
30	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-
31	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-
32	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-
33	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
34	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-
35	-	-	-	-	-	-	-	0	0	-	-	-	-	1	1
36	-	-	-	-	-	-	1	0	1	1	-	1	-	0	0
37	-	-	-	-	1	1	2	0	2	0	-	0	1	0	1
38	-	-	-	-	-	-	1	0	1	0	1	1	0	0	0
39	-	-	-	-	-	-	0	0	0	0	0	0	1	1	2
40	-	-	-	-	-	-	0	1	1	1	0	1	0	0	0
41	-	-	-	-	-	-	0	1	1	-	0	0	0	0	0
42	-	-	-	-	-	-	1	0	1	-	1	1	1	0	1
43	-	-	-	-	-	-	-	2	2	-	1	1	2	1	3
44	-	-	-	-	-	-	-	-	-	-	-	-	0	2	2
45	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3
46	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
47	1	-	1	-	-	-	-	-	-	-	-	-	-	1	1
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	0	1	0	1	1	5	6	11	2	3	5	6	11	17

Appendix Table 10. (cont'd)

Fork length (cm)	Set no. 17			18			19			20			21		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
35	0	3	3	-	1	1	-	-	-	-	-	-	-	-	-
36	5	0	5	2	1	3	-	1	1	-	1	1	-	-	-
37	8	4	12	0	3	3	-	0	0	-	0	0	-	-	-
38	3	2	5	0	2	2	-	0	0	-	0	0	-	-	-
39	5	4	9	0	3	3	-	0	0	1	0	1	-	-	-
40	6	3	9	5	0	5	-	1	1	1	0	1	-	-	-
41	7	2	9	2	1	3	-	0	0	2	1	3	-	-	-
42	16	4	20	4	2	6	-	0	0	6	1	7	-	-	-
43	14	5	19	5	7	12	-	0	0	4	0	4	-	-	-
44	4	1	5	2	3	5	-	0	0	3	0	3	-	-	-
45	7	6	13	1	3	4	-	1	1	1	1	2	-	1	1
46	3	4	7	0	5	5	-	0	0	2	1	3	-	1	1
47	1	5	6	1	1	2	-	0	0	-	-	-	-	0	0
48	-	2	2	1	-	1	-	0	0	-	-	-	-	1	1
49	-	0	0	-	-	-	-	0	0	-	-	-	-	-	-
50	-	0	0	-	-	-	-	1	1	-	-	-	-	-	-
51	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	80	46	126	23	32	55	0	4	4	20	5	25	0	3	3

Appendix Table 10 (cont'd)

Fork length (cm)	Set no. 22			23			24			Total		
	M	F	T	M	F	T	M	F	T	M	F	T
22	-						1		1	1	-	1
23	-	-	-	-	-	-	0	-	0	0	-	0
24	-	-	-	-	-	-	0	-	0	0	-	0
25	-	-	-	-	-	-	0	-	0	0	-	0
26	-	-	-	-	-	-	0	-	0	0	-	0
27	-	-	-	-	-	-	0	-	0	0	-	0
28	-	-	-	-	-	-	0	-	0	0	-	0
29	-	-	-	-	-	-	0	-	0	0	1	1
30	-	-	-	-	-	-	0	-	0	0	1	1
31	-	-	-	-	-	-	1	-	1	1	0	1
32	-	-	-	-	-	-	0	-	0	0	0	0
33	-	-	-	-	-	-	5	1	6	6	2	8
34	-	-	-	-	-	-	7	3	10	11	4	15
35	-	-	-	-	-	-	37	11	48	43	20	63
36	-	-	-	1	-	1	55	22	77	87	35	122
37	-	-	-	1	4	5	65	33	98	92	59	151
38	-	1	1	0	2	2	43	37	80	63	56	119
39	-	0	0	0	3	3	28	22	50	45	41	86
40	-	1	1	0	1	1	48	17	65	75	35	110
41	2	0	2	2	2	4	47	9	56	72	21	93
42	1	0	1	0	0	0	31	11	42	69	20	89
43	2	1	3	1	0	1	19	17	36	57	42	99
44	-	0	0	3	3	6	8	14	22	30	33	63
45	-	0	0	1	2	3	5	11	16	19	33	52
46	-	1	1	-	1	1	1	9	10	10	29	39
47	-	0	0	-	1	1	1	5	6	4	20	24
48	-	0	0	-	1	1	0	0	0	1	7	8
49	-	0	0	-	-	-	0	3	3	0	4	4
50	-	1	1	-	-	-	0	1	1	0	3	3
51	-	-	-	-	-	-	0	-	0	0	2	2
52	-	-	-	-	-	-	0	-	0	0	-	0
53	-	-	-	-	-	-	0	-	0	0	-	0
54	-	-	-	-	-	-	1	-	1	1	-	1
Total	5	5	10	9	20	29	403	226	629	687	468	1155

Appendix Table 11. Length frequency of dogfish, December 1-12, 1975.

Total length (cm)	Set no. 1			2			3			4			5		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	1	1	2	1	3	-	1	1	-	-	-	-	-	-
32	-	1	1	4	2	6	1	0	1	-	-	-	-	-	-
33	2	1	3	3	5	8	1	1	2	-	-	-	-	-	-
34	1	0	1	2	2	4	1	0	1	-	-	-	-	-	-
35	0	0	0	3	2	5	-	0	0	-	-	-	-	-	-
36	0	2	2	1	1	2	-	2	2	-	-	-	-	-	-
37	1	1	2	0	1	1	-	0	0	-	-	-	-	-	-
38	0	0	0	2	3	5	-	0	0	-	-	-	-	-	-
39	0	0	0	1	0	1	-	0	0	-	-	-	-	-	-
40	0	0	0	0	1	1	-	0	0	-	-	-	-	-	-
41	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
42	2	0	2	0	-	0	-	0	0	-	-	-	-	-	-
43	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
44	1	0	1	0	-	0	-	0	0	-	-	-	-	-	-
45	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
46	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
47	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
48	0	0	0	1	-	1	-	0	0	-	-	-	-	-	-
49	0	1	1	0	-	0	-	0	0	-	-	-	-	-	-
50	0	1	1	0	-	0	-	0	0	-	-	-	-	-	-
51	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
52	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
53	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
54	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
55	0	0	0	1	-	1	-	0	0	-	-	-	-	-	-
56	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
57	0	1	1	0	-	0	-	0	0	-	-	-	-	-	-
58	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
59	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
60	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
61	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
62	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
63	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
64	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
65	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
66	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
67	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
68	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
69	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-

Appendix Table 11. (cont'd)

Total length (cm)	Set no. 1			2			3			4			5		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
70	0	2	2	0	-	0	-	0	0	-	-	-	-	-	-
71	0	1	1	0	-	0	-	0	0	-	-	-	-	-	-
72	1	0	1	0	-	0	-	0	0	-	-	-	-	-	-
73	1	0	1	0	-	0	-	0	0	-	-	-	-	-	-
74	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
75	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
76	0	0	0	1	-	1	-	0	0	-	-	-	-	-	-
77	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
78	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
79	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
80	0	1	1	0	-	0	-	0	0	-	-	-	-	-	-
81	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
82	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
83	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
84	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
85	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
86	0	0	0	0	-	0	-	0	0	-	-	-	-	-	-
87	1	0	1	0	-	0	-	0	0	-	-	-	-	-	-
88	1	0	1	0	-	0	-	0	0	-	-	-	-	-	-
89	-	0	0	1	-	1	-	1	1	-	-	-	-	-	-
90	-	1	1	-	-	-	-	0	0	-	-	-	-	-	-
91	-	0	0	-	-	-	-	0	0	-	-	-	-	-	-
92	-	1	1	-	-	-	-	1	1	-	-	-	-	-	-
93	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
94	-	-	-	-	-	-	-	0	0	-	1	1	-	-	-
95	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
96	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
97	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
98	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
99	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
100	-	-	-	-	-	-	-	1	1	-	0	0	-	-	-
101	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
102	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
103	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
104	-	-	-	-	-	-	-	0	0	-	0	0	-	-	-
105	-	-	-	-	-	-	-	0	0	-	0	0	-	1	1
106	-	-	-	-	-	-	-	1	1	-	0	0	-	-	-
107	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
108	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
109	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
110	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
Total	11	15	26	22	18	40	3	9	12	0	2	2	0	1	1

Appendix Table 11 (cont'd)

Total length (cm)	Set no. 6			7			8			9			10		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
35	-	-	-	-	-	-	0	-	0	-	-	-	-	-	-
36	-	-	-	-	-	-	0	-	0	-	-	-	-	-	-
37	-	-	-	-	1	1	2	-	2	-	-	-	-	-	-
38	-	-	-	-	0	0	3	1	4	-	-	-	-	-	-
39	-	-	-	1	0	1	2	0	2	-	-	-	-	-	-
40	-	-	-	1	1	2	3	0	3	1	-	1	-	-	-
41	-	-	-	0	1	1	0	0	0	0	-	0	1	-	1
42	-	-	-	0	0	0	1	1	2	0	-	0	0	-	0
43	-	-	-	0	1	1	4	2	6	0	-	0	0	-	0
44	-	-	-	0	1	1	0	1	1	0	-	0	0	-	0
45	-	-	-	0	1	1	2	0	2	1	-	1	1	-	1
46	-	-	-	1	0	1	1	0	1	0	-	0	0	-	0
47	-	-	-	1	0	1	0	0	0	0	-	0	0	-	0
48	-	-	-	1	0	1	1	2	3	0	-	0	0	-	0
49	-	-	-	1	1	1	0	0	0	0	-	0	0	-	0
50	-	-	-	0	0	0	3	0	3	0	-	0	0	1	1
51	-	-	-	0	1	1	1	0	1	0	-	0	0	-	0
52	-	-	-	0	0	0	0	0	0	0	-	0	0	-	0
53	-	-	-	0	0	0	1	1	2	1	-	1	0	-	0
54	-	-	-	1	1	2	1	-	1	0	-	0	0	-	0
55	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
56	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
57	-	-	-	0	0	0	0	-	0	1	-	1	0	-	0
58	-	-	-	0	1	1	0	-	0	0	-	0	0	-	0
59	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
60	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
61	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
62	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
63	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
64	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
65	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
66	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
67	-	-	-	1	0	1	0	-	0	0	-	0	0	-	0
68	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0
69	-	-	-	0	0	0	0	-	0	0	-	0	0	-	0

Appendix Table 11 (cont'd)

Total length (cm)	Set no. 6			7			8			9			10		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
70	-	-	-	0	1	1	1	-	1	0	-	0	0	-	0
71	-	-	-	0	-	0	0	-	0	0	-	0	0	-	0
72	-	-	-	0	-	0	0	-	0	0	-	0	0	-	0
73	-	-	-	0	-	0	1	-	1	0	-	0	0	-	0
74	-	-	-	1	-	1	0	-	0	0	-	0	0	-	0
75	-	-	-	1	-	1	0	-	0	0	-	0	0	-	0
76	-	-	-	1	-	1	0	-	0	0	-	0	0	-	0
77	1	-	1	0	-	0	0	-	0	0	-	0	0	-	0
78	-	-	0	0	-	0	0	-	0	0	-	0	0	-	0
79	-	-	0	0	-	0	0	-	0	0	-	0	0	-	0
80	-	-	0	0	-	0	0	-	0	0	-	0	1	-	1
81	-	-	0	0	-	0	0	-	0	0	-	0	-	-	-
82	-	-	0	0	-	0	0	-	0	0	-	0	-	-	-
83	-	-	0	0	-	0	0	-	0	0	-	0	-	-	-
84	-	-	0	0	-	0	0	-	0	0	-	0	-	-	-
85	-	1	1	1	-	1	0	-	0	1	-	1	-	-	-
86	-	0	0	0	-	0	0	-	0	-	-	-	-	-	-
87	-	0	0	1	-	1	0	-	0	-	-	-	-	-	-
88	-	0	0	0	-	0	0	-	0	-	-	-	-	-	-
89	-	0	0	0	-	0	0	-	0	-	-	-	-	-	-
90	-	0	0	1	-	1	1	-	1	-	-	-	-	-	-
91	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
92	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
93	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
94	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
95	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
96	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
97	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
98	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
99	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
100	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
101	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
102	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
103	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
104	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
105	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
106	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	2	3	18	12	30	29	8	37	5	0	5	3	1	4

Appendix Table 11 (cont'd)

Total length (cm)	Set no. 11 M	11 F	11 T	12 M	12 F	12 T	13 M	13 F	13 T	14 M	14 F	14 T	15 M	15 F	15 T
29	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
30	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
31	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
32	-	-	-	1	0	1	-	-	-	-	-	-	-	-	-
33	1	-	1	0	0	-	-	-	-	-	-	-	-	-	-
34	-	-	0	1	0	1	-	-	-	1	-	1	2	-	2
35	-	-	0	0	2	2	-	-	-	0	-	0	0	1	1
36	-	-	0	1	1	2	-	-	-	3	-	3	0	2	2
37	-	-	0	-	1	1	-	-	-	2	-	2	1	4	5
38	-	-	0	-	0	0	1	-	1	0	-	0	2	3	5
39	-	-	0	-	0	0	1	-	1	0	-	0	4	3	7
40	-	-	0	-	0		1	-	1	0	-	0	7	8	15
41	-	-	0	-	1	1	0	-	0	0	-	0	4	9	13
42	-	-	0	-	0	0	1	-	1	0	-	0	7	3	10
43	-	-	0	-	0	0	0	-	0	0	-	0	2	2	4
44	-	-	0	-	0	0	0	-	0	0	-	0	4	2	6
45	-	-	0	-	0	0	1	-	1	0	-	0	4	4	8
46	-	-	0	-	0	0	0	-	0	0	-	0	3	4	7
47	-	-	0	-	0	0	0	-	0	0	-	0	4	2	6
48	-	-	0	-	0	0	0	-	0	0	-	0	4	2	6
49	-	-	0	-	0	0	0	-	0	0	-	0	2	2	4
50	-	-	0	-	0	0	0	-	0	0	-	0	3	0	3
51	-	-	0	-	0	0	0	-	0	0	-	0	1	0	1
52	-	-	0	-	0	0	0	-	0	0	-	0	2	1	3
53	-	-	0	-	0	0	0	-	0	0	-	0	0	1	1
54	-	-	0	-	0	0	0	-	0	0	-	0	1	1	2
55	-	-	0	-	0	0	0	-	0	0	-	0	0	1	1
56	-	-	0	-	0	0	0	-	0	0	-	0	2	2	4
57	-	-	0	-	0	0	0	-	0	0	-	0	0	-	0
58	-	-	0	-	0	0	0	-	0	0	-	0	0	-	0
59	-	-	0	-	0	0	0	-	0	0	-	0	2	-	2
60	-	-	0	-	0	0	0	-	0	0	1	1	1	-	1
61	-	-	0	-	0	0	0	-	0	0	0	0	1	-	1
62	-	-	0	-	0	0	0	-	0	0	0	0	1	-	1
63	-	-	0	-	0	0	0	-	0	0	0	0	1	-	1
64	-	-	0	-	0	0	0	-	0	0	0	0	1	-	1
65	-	-	0	-	0	0	0	-	0	0	0	0	0	-	0
66	-	-	0	-	0	0	0	-	0	0	0	0	0	-	0
67	-	-	0	-	0	0	0	-	0	1	0	1	1	-	1
68	-	-	0	-	0	0	0	-	0	0	0	0	1	-	1
69	-	-	0	-	1	1	0	-	0	0	0	0	0	-	0

Appendix Table 11 (cont'd)

Total length (cm)	Set no. 11			12			13			14			15		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
70	-	-	0	-	-	-	0	-	0	0	1	1	0	-	0
71	-	-	0	-	-	-	0	-	0	0	0	0	0	-	0
72	-	-	0	-	-	-	0	-	0	0	1	1	1	-	1
73	-	-	0	-	-	-	0	-	0	0	0	0	0	-	0
74	-	-	0	-	-	-	0	-	0	0	0	0	0	-	0
75	-	-	0	-	-	-	0	-	0	1	0	1	0	-	0
76	-	-	0	-	-	-	0	-	0	2	1	3	2	-	2
77	-	-	0	-	-	-	0	-	0	-	0	0	2	-	2
78	-	-	0	-	-	-	1	-	1	-	0	0	0	-	0
79	-	-	0	-	-	-	0	-	0	-	0	0	0	-	0
80	-	-	0	-	-	-	1	-	1	-	1	1	2	-	2
81	-	-	0	-	-	-	4	-	4	-	0	0	2	-	2
82	-	-	0	-	-	-	4	-	4	-	1	1	1	-	1
83	-	-	0	-	-	-	1	-	1	-	0	0	1	-	1
84	-	-	0	-	-	-	2	-	2	-	1	1	1	-	1
85	-	-	0	-	-	-	1	-	1	-	1	1	0	-	0
86	-	-	0	-	-	-	2	-	2	-	0	0	0	-	0
87	-	-	0	-	-	-	1	-	1	-	0	0	1	-	1
88	-	-	0	-	-	-	2	-	2	-	0	0	0	-	0
89	-	-	0	-	-	-	1	-	1	-	0	0	4	-	4
90	-	-	0	-	-	-	0	1	1	-	0	0	1	-	1
91	-	-	0	-	-	-	0	-	0	-	0	0	0	-	0
92	-	-	0	-	-	-	1	-	1	-	2	2	0	-	0
93	-	-	0	-	-	-	-	-	-	-	-	-	1	-	1
94	-	1	1	-	-	-	-	-	-	-	-	-	0	-	0
95	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
96	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
97	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	1	2	3	8	11	26	1	27	10	10	20	88	57	145

Appendix Table 11 (cont'd)

Total length (cm)	Set no. 16			17			18			19			20		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
34	-	-	-	-	-	-	-	-	-	1	0	1	-	-	-
35	1	-	1	-	-	-	-	-	-	2	2	4	-	-	-
36	0	-	-	-	-	-	-	-	-	2	0	2	-	-	-
37	0	-	-	-	-	-	-	-	-	0	2	2	-	-	-
38	1	3	4	-	-	-	-	-	-	3	3	6	-	-	-
39	1	0	1	-	-	-	-	-	-	1	2	3	-	-	-
40	2	5	7	-	-	-	-	-	-	4	2	6	-	-	-
41	10	4	14	-	-	-	-	-	-	0	2	2	-	-	-
42	11	4	15	-	-	-	-	-	-	1	1	2	-	-	-
43	10	7	17	-	-	-	-	-	-	0	1	1	-	-	-
44	16	13	29	-	-	-	-	-	-	0	1	1	-	-	-
45	23	4	27	-	-	-	-	-	-	2	3	5	-	-	-
46	18	9	27	-	-	-	-	-	-	1	0	1	-	-	-
47	18	10	28	-	-	-	-	-	-	0	2	2	-	-	-
48	24	7	31	-	-	-	-	-	-	0	0	0	-	-	-
49	18	8	26	-	-	-	-	-	-	0	0	0	-	-	-
50	21	5	26	-	-	-	-	-	-	0	0	0	-	-	-
51	13	5	18	-	-	-	-	-	-	0	0	0	-	-	-
52	6	7	13	-	-	-	-	-	-	0	0	0	-	-	-
53	14	7	21	-	-	-	-	-	-	0	0	0	-	-	-
54	7	6	13	-	-	-	-	-	-	0	0	0	-	-	-
55	9	3	12	-	-	-	-	-	-	1	0	1	-	-	-
56	8	3	11	-	-	-	-	-	-	0	0	0	-	1	1
57	9	1	10	-	-	-	-	-	-	0	0	0	-	0	0
58	2	2	4	-	-	-	-	-	-	0	0	0	-	0	0
59	4	2	6	-	-	-	-	-	-	0	0	0	-	0	0
60	8	1	9	-	-	-	-	-	-	0	0	0	-	0	0
61	6	4	10	-	-	-	-	-	-	0	0	0	-	0	0
62	6	2	8	-	-	-	-	-	-	0	0	0	-	0	0
63	6	2	8	-	-	-	-	-	-	0	0	0	-	0	0
64	5	1	6	-	-	-	-	-	-	0	0	0	-	0	0
65	7	1	8	-	-	-	-	-	-	0	0	0	-	0	0
66	5	1	6	-	-	-	-	-	-	0	0	0	-	0	0
67	3	1	4	-	-	-	-	-	-	0	0	0	-	0	0
68	7	0	7	-	-	-	-	-	-	0	0	0	-	0	0
69	6	0	6	-	-	-	-	-	-	0	1	1	-	0	0

Appendix Table 11 (cont'd)

Total length (cm)	Set no. 16			17			18			19			20		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
70	9	0	9	-	-	-	-	-	-	0	-	0	-	0	0
71	4	0	4	-	-	-	-	-	-	1	-	1	-	0	0
72	4	0	4	-	-	-	-	-	-	0	-	0	-	0	0
73	3	1	4	-	-	-	-	-	-	0	-	0	-	0	0
74	5	0	5	-	-	-	-	-	-	0	-	0	-	0	0
75	4	0	4	-	-	-	-	-	-	1	-	1	-	0	0
76	2	0	2	-	-	-	-	-	-	1	-	1	-	0	0
77	3	1	4	-	-	-	-	-	-	0	-	0	-	0	0
78	1	-	1	-	-	-	1	-	1	0	-	0	-	0	0
79	1	-	1	1	-	1	1	-	1	0	-	0	-	0	0
80	1	-	1	0	-	0	0	-	0	0	-	0	-	0	0
81	0	-	0	0	-	0	1	-	1	0	-	0	-	0	0
82	0	-	0	0	-	0	0	-	0	0	-	0	-	0	0
83	0	-	0	0	-	0	1	-	1	0	-	0	-	0	0
84	2	-	2	0	-	0	2	-	2	0	-	0	-	0	0
85	1	-	1	0	-	0	0	-	0	2	-	2	-	0	0
86	1	-	1	1	-	1	2	-	2	3	-	3	-	0	0
87	1	-	1	0	-	0	0	-	0	1	-	1	-	0	0
88	1	-	1	1	-	1	1	-	1	3	-	3	-	0	0
89	-	-	-	-	-	-	0	-	0	-	-	-	-	2	2
90	-	-	-	-	-	-	1	-	1	-	-	-	-	0	0
91	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
92	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
93	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	348	130	478	3	0	3	10	0	10	30	23	53	0	4	4

Appendix Table 11 (cont'd)

Total length (cm)	Set no. 21			22			23			24			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
29	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
30	-	-	-	-	1	1	-	-	-	-	-	-	-	2	2
31	-	-	-	-	0	0	-	-	-	-	-	-	2	3	5
32	-	-	-	-	0	0	-	-	-	-	-	-	6	3	9
33	-	-	-	-	0	0	-	-	-	-	-	-	7	8	15
34	-	-	-	-	0	0	-	-	-	-	-	-	10	2	12
35	-	-	-	1	0	1	-	-	-	-	-	-	7	7	14
36	-	-	-	0	0	0	-	-	-	-	-	-	7	8	15
37	-	-	-	0	0	0	-	-	-	-	-	-	6	10	16
38	-	2	2	0	0	0	-	-	-	-	-	-	12	15	27
39	-	0	0	0	0	0	-	-	-	-	-	-	11	5	16
40	-	1	1	0	0	0	-	-	-	-	-	-	19	18	37
41	-	0	0	0	0	0	-	-	-	-	-	-	15	17	32
42	-	0	0	0	0	0	-	-	-	-	-	-	23	9	32
43	-	0	0	0	1	1	-	-	-	-	-	-	16	14	30
44	-	1	1	0	0	0	-	-	-	-	-	-	21	19	40
45	-	0	0	0	0	0	-	-	-	-	-	-	34	12	46
46	2	0	2	1	0	1	-	-	-	-	-	-	27	13	40
47	1	1	2	0	2	2	-	-	-	-	-	-	24	17	41
48	3	1	4	2	0	2	-	-	-	-	-	-	36	12	48
49	2	1	3	0	2	2	-	-	-	-	-	-	23	15	38
50	5	0	5	0	1	1	-	-	-	-	-	-	32	8	40
51	1	0	1	0	0	0	-	-	-	-	-	-	16	6	22
52	0	0	0	0	0	0	-	-	-	-	-	-	8	8	16
53	0	0	0	0	0	0	-	-	-	-	-	-	16	9	25
54	2	0	2	0	0	0	-	-	-	-	-	-	12	8	20
55	1	1	2	0	0	0	-	-	-	-	-	-	12	5	17
56	0	0	0	0	0	0	-	-	-	-	-	-	10	6	16
57	0	0	0	0	0	0	-	-	-	-	-	-	10	2	12
58	1	0	1	0	0	0	-	-	-	-	-	-	3	3	6
59	1	0	1	0	0	0	-	-	-	-	-	-	7	2	9
60	0	0	0	0	0	0	-	-	-	-	-	-	10	3	13
61	0	1	1	0	0	0	-	-	-	-	-	-	7	5	12
62	0	0	0	0	0	0	-	-	-	-	-	-	7	2	9
63	0	0	0	0	0	0	-	-	-	-	-	-	9	2	11
64	0	0	0	0	0	0	-	-	-	-	-	-	7	1	8
65	0	0	0	1	0	1	-	-	-	-	-	-	8	1	9
66	1	0	1	0	1	1	-	-	-	-	-	-	6	2	8
67	0	0	0	0	-	0	-	-	-	-	-	-	6	1	7
68	0	0	0	0	-	0	1	-	1	-	-	-	9	0	9
69	0	0	0	0	-	0	0	-	0	-	-	-	6	2	8

Appendix Table 11 (cont'd)

Total length (cm)	Set no. 21 M	21 F	21 T	22 M	22 F	22 T	23 M	23 F	23 T	24 M	24 F	24 T	Total M	Total F	Total T
70	0	0	0	0	-	0	0	-	0	-	-	-	10	4	14
71	0	0	0	0	-	0	0	-	0	-	-	-	5	1	6
72	1	1	2	0	-	0	0	-	0	-	-	-	7	2	9
73	0	0	0	0	-	0	0	-	0	-	-	-	5	1	6
74	0	0	0	0	-	0	0	-	0	1	-	1	7	0	7
75	1	0	1	1	-	1	0	-	0	0	-	0	9	0	9
76	-	0	0	1	-	1	0	-	0	0	-	0	10	1	11
77	-	0	0	0	-	0	0	-	0	0	-	0	6	1	7
78	-	0	0	1	-	1	0	-	0	0	-	0	4	0	4
79	-	0	0	1	-	1	0	-	0	0	-	0	4	0	4
80	-	0	0	0	-	0	1	-	1	1	1	2	7	3	10
81	-	0	0	1	-	1	0	-	0	0	1	1	8	1	9
82	-	0	0	0	-	0	0	-	0	1	0	1	6	1	7
83	-	0	0	0	-	0	0	-	0	1	0	1	4	0	4
84	-	0	0	2	-	2	1	-	1	1	0	1	11	1	12
85	-	0	0	0	-	0	1	-	1	0	1	1	7	3	10
86	-	0	0	0	-	0	0	-	0	0	0	0	9	0	9
87	-	0	0	0	-	0	0	-	0	0	0	0	6	0	6
88	-	0	0	1	-	1	1	-	1	0	0	0	11	0	11
89	-	0	0	0	-	0	-	-	-	0	0	0	6	3	9
90	-	1	1	1	-	1	-	-	-	1	1	2	6	4	10
91	-	-	-	-	-	-	-	-	-	-	1	1	0	1	1
92	-	-	-	-	-	-	-	-	-	-	1	1	1	5	6
93	-	-	-	-	-	-	-	-	-	-	0	0	1	2	3
94	-	-	-	-	-	-	-	-	-	-	1	1	0	3	3
95	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0
96	-	-	-	-	-	-	-	-	-	-	1	1	0	1	1
97	-	-	-	-	-	-	-	-	-	-	2	2	1	2	3
98	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1
99	-	-	-	-	-	-	-	-	-	-	0	0	-	0	0
100	-	-	-	-	-	-	-	-	-	-	1	1	-	2	2
101	-	-	-	-	-	-	-	-	-	-	2	2	-	2	2
102	-	-	-	-	-	-	-	-	-	-	2	2	-	2	2
103	-	-	-	-	-	-	-	-	-	-	0	0	-	0	0
104	-	-	-	-	-	-	-	-	-	-	1	1	-	2	2
105	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1
106	-	-	-	-	-	-	-	-	-	-	1	1	-	3	3
107	-	-	-	-	-	-	-	-	-	-	0	0	-	0	0
108	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1
109	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
110	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	22	11	33	14	8	22	5	0	5	6	20	26	658	341	999

POOR

QUALITY

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